

ANNUAL REPORT

OF THE

DEPARTMENT OF THE INTERIOR

FOR THE

Fiscal Year ending March 31, 1909

PRINTED BY ORDER OF PARLIAMENT



OTTAWA

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EXCELLENT MAJESTY

1909

[No. 25—1909.]

*To His Excellency the Right Honourable Sir Albert Henry George, Earl Grey,
G.C.M.G., &c., &c., Governor General of Canada.*

MAY IT PLEASE YOUR EXCELLENCY:

The undersigned has the honour to lay before Your Excellency the report of the transactions of the Department of the Interior for the fiscal year ending March 31, 1909.

Respectfully submitted,

FRANK OLIVER,
Minister of the Interior.

OTTAWA, AUGUST 2, 1909.

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REPORT
OF THE
DEPUTY MINISTER OF THE INTERIOR
1908-9

DEPARTMENT OF THE INTERIOR,
OTTAWA, July 15, 1909.

The Honourable FRANK OLIVER,
Minister of the Interior.

SIR,—I have the honour to submit the thirty-sixth Annual Report of the Department of the Interior, for the twelve months ending March 31, 1909.

As evidenced by the statements submitted by the chief officers in charge of the various services of the department, the general results obtained have been highly satisfactory. The net revenue derived on account of Dominion lands has been the largest in the history of the department, and while there has been a falling off in the total emigration to Canada, there has been a substantial increase in the number of free homestead entries granted to agriculturists, as compared with the previous year. The work in consequence has been unusually heavy, especially as a result of the opening up to pre-emption and homestead entry of all the available odd numbered sections in the provinces of Manitoba, Saskatchewan and Alberta on September 1, last. However, I am glad to be in a position to state that the recent amendments made to the Dominion Lands Act, coupled with the framing, under your immediate supervision, of rulings and regulations for the guidance of agents and the general information of the public, have contributed largely to simplifying the land administration of the department; and to these factors chiefly must be attributed the success attending the efforts of the officers in charge of the land agencies in the west in properly dealing with the tremendous increase in work in most of the offices.

It is to be hoped that it may be possible at an early date to similarly consolidate the Immigration Act and to bring about such changes and amendments to the present law as may facilitate the administration of this important branch of the department.

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DEATHS.

I regret to have to report that there were ten deaths in the department during the past year, namely four at headquarters and six in the outside service. The following is a list of the persons who have died:—

Head Office—

Mrs. J. Ricard, Secretary's Branch, died November 20, 1908.

Mederic Marin, Registration Branch, died November 24, 1908.

Wm. F. Ratz, D.L.S., Surveys Branch, died February 6, 1909.

C. G. Wood, Geographer's Branch, died February 24, 1909.

Outside Service—

Miss Ella Carr, Immigration Office, Winnipeg, died April 16, 1908.

R. S. Cook, agent Dominion Lands, Prince Albert, died October 27, 1908.

Mrs. Julia Marquette, matron Immigration Hospital, Quebec, died November 1, 1908.

T. H. Ritchie, guardian, Detention Hospital, St. John, N.B., died December 31, 1908.

Alexander Bailey, Immigration Office, Halifax, N.S., died January 5, 1909.

Geo. Noot, Immigration Boundary Inspector, White Horse Pass, died January 25, 1909.

STATEMENT showing Gross Cash Revenue received from all Sources during the Fiscal Year ended March 31, 1909, compared with Receipts for the previous Fiscal Year.

Source of Revenue.	Fiscal Year 1908-9.	Fiscal Year 1907-8.	Increase.	Decrease.	Net Increase.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Dominion Lands.....	2,254,283 98	1,998,219 92	256,064 06		
School Lands.....	687,422 74	708,045 83		20,623 09	
Ordnance Lands.....	205,749 96	8,674 95	197,075 61		
Seed Grain	53,590 86	12,899 84	40,691 02		
Casual Revenue.....	26,224 29	20,069 03	6,155 26		
Registration Fees (Yukon).....	1,352 13	2,256 65		904 52	
Fines under the Immigration Act.....	40 00	1,650 00		1,610 00	
Fines and Forfeitures, N.W.T.....	241 00		241 00		
Total... ..	3,228,904 96	2,751,816 22	500,226 35	23,137 61	477,088 74

SESSIONAL PAPER No. 25

STATEMENT of Receipts on account of Dominion Lands Revenue for the Fiscal Year ended March 31, 1909, as compared with the Receipts for the previous year. (Net Cash Revenue.)

Particulars.	1908-1909.	1907-1908.	Increase.	Decrease.	Net Increase.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Homestead fees	389,639 00	301,693 73	87,945 27		
Pre-emption fees	141,550 15		141,550 15		
Purchased homestead fees	8,245 00		8,245 00		
Improvements	70,928 86	71,139 47		210 61	
Sales of lands	951,442 28	656,303 03	295,139 25		
Map sales, office fees, &c.	7,296 55	7,727 29		430 74	
Rentals of lands	9,986 86	5,309 01	4,677 85		
Survey fees	42,388 31	141,255 35		98,867 04	
Timber dues	269,837 52	473,608 94		203,771 42	
Grazing lands	53,312 79	43,211 78	10,101 01		
Coal lands	55,535 89	29,697 64	25,838 25		
Hay permits	5,921 80	4,976 45	945 35		
Mining fees	92,637 60	130,703 55		38,065 95	
Hydraulic leases	4,488 81	6,248 57		1,760 16	
Dredging leases	11,188 34	19,616 84		8,428 50	
Export tax on gold	81,585 07	70,504 65	11,080 42		
Free certificates for export of gold	166 00	162 50	3 50		
Stone quarries	906 38	1,270 93		364 55	
Irrigation fees	367 00	516 75		149 75	
Rent of water power	542 28	2,640 78		2,098 50	
Fees of Board of Examiners, D.L.S.	1,040 00	690 00	350 00		
Patent and interchange fees	1,334 50	1,283 50	51 00		
Rocky Mountains Park	31,321 20	27,232 87	4,088 33		
Free miners' certificates		76 25		76 25	
Suspense account	4,533 16	1,385 35	2,947 81		
Refunds of refunds	18,165 26	692 77	17,412 49		
Miscellaneous	783 37	271 52	511 85		
	2,254,283 98	1,998,219 92	610,287 53	354,223 47	
Refunds	101,029 37	114,600 04		13,570 67	
	2,153,254 61	1,883,619 88	610,287 53	340,652 80	269,634 73

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STATEMENT showing Receipts on Account of Dominion Lands from July 1, 1872, to March 31, 1909.

Fiscal Year.	Homestead Fees.	Pre-emption Fees.	Improvements.	SALES.		Map Sales, Office and Registration Fees, &c.	Dominion Lands Surveyors Examination Fees.	Rentals, Survey Fees, Miscellaneous, including Trust Account.	Purchased Homestead, Inspection, Cancellation and Sundry Fees.	Timber Dues.
	\$	cts.	\$	cts.	Cash.	scrip.	\$	cts.	\$	cts.
1872-73.	6,960 00	...	...	...	19,170 20	...	...	...	...	109 25
1873-74.	7,310 00	...	...	...	19,834 75	...	...	...	...	2,710 55
1874-75.	11,510 00	...	...	...	13,666 90	...	...	...	...	2,335 25
1875-76.	4,680 00	...	...	...	3,478 94	...	...	...	...	887 00
1876-77.	2,250 00	...	...	...	2,794 86	...	...	...	...	320 00
1877-78.	14,540 00	...	...	...	1,083 86	...	...	...	...	1,620 00
1878-79.	17,690 00	...	...	...	4,998 39	...	...	...	...	525 00
1879-80.	41,255 00	...	...	...	45,708 97	...	...	...	...	25,121 46
1880-81.	20,450 00	...	...	...	71,170 17	...	...	...	...	32,028 34
1881-82.	54,155 00	...	...	...	1,240,328 27	...	...	...	...	58,753 14
1882-83.	73,015 00	...	...	...	516,092 21	...	...	...	...	90,065 46
1883-84.	41,380 00	...	...	...	424,863 36	...	...	...	...	137,983 10
1884-85.	25,645 00	...	...	...	196,275 32	...	...	...	...	87,474 99
1885-86.	26,110 00	...	...	...	76,140 41	...	...	...	...	64,820 31
1886-87.	19,614 00	...	...	...	214,637 97	...	...	...	...	65,111 74
1887-88.	23,691 00	...	...	...	337,640 19	...	...	...	...	94,964 55
1888-89.	39,469 00	...	...	...	48,175 76	...	...	...	...	90,290 00
1889-90.	35,429 00	...	...	...	52,238 36	...	...	...	...	20,232 50
1890-91.	23,164 10	...	...	...	57,513 16	...	...	...	...	14,712 50
1891-92.	46,994 00	...	...	...	31,664 98	...	...	...	...	25,898 49
1892-93.	37,468 74	...	...	...	108,901 01	...	...	...	...	22,014 63
1893-94.	36,482 25	...	...	...	53,254 71	...	...	...	...	13,457 09
1894-95.	34,664 88	...	...	...	37,293 71	...	...	...	...	11,097 00
1895-96.	18,278 00	...	...	...	46,373 98	...	...	...	...	6,505 90
1896-97.	21,179 00	...	...	...	49,335 53	...	...	...	...	21,679 31
1897-98.	34,780 00	...	...	...	80,178 64	...	...	...	...	6,810 50
1898-99.	58,235 00	...	...	...	116,598 35	...	...	...	...	735 05
1899-1900.	72,690 00	...	...	...	103,247 58	...	...	...	...	1,987 40
1900-1901.	79,910 00	...	...	...	40,369 93	...	...	...	...	21,242 66
1901-1902.	144,425 00	...	...	...	66,950 21	...	...	...	...	75,085 95
1902-1903.	520,499 65	...	...	...	155,507 59	...	...	...	...	13,549 50
1903-1904.	255,772 36	...	...	...	136,759 15	...	...	...	...	38,072 54
1904-1905.	301,806 25	...	...	...	154,128 04	...	...	...	...	14,937 00
1905-1906.	417,834 25	...	...	...	442,588 69	...	...	...	...	71,907 30
1906-1907 (nine months).	215,449 55	...	...	...	39,763 63	...	...	...	...	125,158 56
1907-1908.	301,693 73	...	...	...	71,139 47	...	...	...	...	1,089 51
1908-1909.	389,039 00	...	...	...	951,442 28	...	...	...	...	1,283 50
Total.	3,280,31 77	348,291 16	350,916 12	6,790,100 94	3,790,122 96	83,265 91	10,999 00	1,377,970 39	233,858 54	4,819,609 87

STATEMENT showing Receipts on Account of Dominion Lands from July 1, 1872, to March 31, 1909—*Concluded.*

Fiscal Year.	GRAZING LANDS.		HAY, COAL, MINING, STONE QUARRIES, EXPORT TAX ON GOLD, &c.				Rocky Mountains Park of Canada.		COLONIZATION LANDS.		Gross Revenue.		Refunds.		Net Revenue.		
	CASH.		SERIP. &c.		CASH.		SERIP.		CASH.		SERIP.		GROSS REVENUE.		NET REVENUE.		
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	
1872-73.....																26,239 45	
1873-74.....																29,980 80	
1874-75.....																27,641 15	
1875-76.....																8,865 94	
1876-77.....																140,755 02	
1877-78.....																139,584 40	
1878-79.....																234,732 93	
1879-80.....																266,801 57	4,636 08
1880-81.....	2,245 00															1,806,734 87	10,687 55
1881-82.....	22,844 43															1,051,403 00	8,746 05
1882-83.....	11,370 60															1,001,776 67	9,220 85
1883-84.....	17,080 75															451,564 65	12,070 85
1884-85.....	29,562 51															588,532 80	19,543 16
1885-86.....	14,242 77															563,986 68	6,277 66
1886-87.....	5,922 47															594,088 04	5,226 23
1887-88.....	2,207 69															462,536 26	8,209 74
1888-89.....	1,305 57															469,151 08	15,291 30
1889-90.....	3,079 55															362,324 43	18,314 97
1890-91.....	3,726 80															250,069 12	4,544 01
1891-92.....	6,380 80															257,983 10	4,365 99
1892-93.....	5,740 79															8,368 79	219 35
1893-94.....	5,353 72															1,066,853 57	15,010 54
1894-95.....	7,071 86															1,094,741 63	4,678 55
1895-96.....	4,715 01															1,584,328 32	32,296 89
1896-97.....	4,728 58															1,593,743 00	23,062 28
1897-98.....	5,245 88															1,874,159 09	18,368 85
1898-99.....	8,382 86															1,482,679 25	27,165 55
1899-1900.....	4,726 28															1,890,886 83	21,519 84
1900-1901.....	7,262 46															1,681,824 70	36,721 75
1901-1902.....	13,913 33															1,329,382 35	25,786 90
1902-1903.....	19,790 27															1,769,315 28	33,418 36
1903-1904.....	36,145 82															1,400,503 31	35,117 48
1904-1905.....	51,583 89															2,094,579 04	113,080 04
1905-1906.....	38,145 82															2,277,678 09	102,463 78
1906-1907 (nine months).....	43,711 91																
1907-1908*.....	43,711 91																
1908-1909.....	53,312 79																
	434,904 67				232,438 45				360 00	857,461 08		30,460 50		30,087,077 13	701,815 89	29,385,261 24	

* Including scrip.

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STATEMENT of Rocky Mountains Park Revenue for Fiscal Year ended March 31, 1909,
as compared with Revenue for previous year.

Particulars.	Fiscal year 1908-9.	Fiscal year 1907-8.	Increase.	Decrease.	Net Increase.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Rent.....	4,567 82	5,351 49	.....	783 67	
Timber dues	1,862 14	1,341 39	520 75		
Water rates	410 00	208 44	201 56		
Transfer fees.....	32 00	46 00	.....	14 00	
Cave and basin (bathing tickets).....	2,801 50	3,277 00	.....	475 50	
Quarry permits	236 73	488 00	.....	251 27	
Dog licenses.....	372 70	181 50	191 20		
Livery licenses.....	394 00	567 00	.....	173 00	
Pool, billiard and bowling licenses.....	150 00	160 00	.....	10 00	
Boat licenses.....	89 00	25 00	64 00		
Butcher licenses.....	50 00	40 00	10 00		
Coal lands.....	16,252 44	11,866 86	4,385 64		
Grazing lands.....	180 00	230 00	.....	50 00	
Hot Springs (bathing tickets).....	2,988 00	3,108 50	.....	120 50	
Telephone rent.....	694 00	242 50	451 50		
Fines.....	36 00	11 00	25 00		
Sale of lumber.....	.....	20 00	.....	20 00	
Pedlars' licenses.....	54 00	36 00	18 00		
Camping permits	23 00	22 00	1 00		
Lime, permits	4 75	.....	4 75		
Miscellaneous.....	123 12	10 25	112 87		
	31,321 20	27,232 87	5,986 27	1,897 94	4,088 33

REVENUE.

The gross cash revenue of the department during the year was \$3,228,904.96, which shows an increase of over \$477,088.74 as compared with the previous year. The net increase in the cash revenue of the department on account of Dominion Lands was \$269,634.73. This increase is largely attributable to the amount received on account of pre-emption fees and the increase in the number of homestead entries granted during the year. It may be pointed out that it is not the policy of the department to dispose of land by sale, and while the statement shows a very large revenue derived under that head it should be explained that this amount is made up largely of moneys received on account of the sale of irrigation, coal, and purchased homestead lands, as provided under the law in that behalf.

The following is a comparative statement of the homestead entries and sales which have been made at the several agencies of the department during the fiscal years ending March 31, 1908, and March 31, 1909, respectively.

	Fiscal year ending March 31, 1908.		Fiscal year ending March 31, 1909.	
	No. of Entries.	Acres.	No. of Entries.	Acres.
Homesteads	30,424	4,867,840	39,081	6,252,960
Sales.....	179,894	191,315

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The following statement shows the number of homestead entries reported in each year since 1874.

Departmental year ended		Number of Entries.
October	31, 1874.....	1,376
"	31, 1875.....	499
"	31, 1876.....	347
"	31, 1877.....	845
"	31, 1878.....	1,788
"	31, 1879.....	4,068
"	31, 1880.....	2,074
"	31, 1881.....	2,753
"	31, 1882.....	7,483
"	31, 1883.....	6,063
"	31, 1884.....	3,753
"	31, 1885.....	1,858
"	31, 1886.....	2,657
"	31, 1887.....	2,036
"	31, 1888.....	2,655
"	31, 1889.....	4,416
"	31, 1890.....	2,955
"	31, 1891.....	3,523
"	31, 1892.....	4,840
"	31, 1893.....	4,067
"	31, 1894.....	3,209
December	31, 1895.....	2,394
"	31, 1896.....	1,837
"	31, 1897.....	2,384
"	31, 1898.....	4,848
"	31, 1899.....	6,689
June	30, 1900.....	7,426
"	30, 1901.....	8,167
"	30, 1902.....	14,673
"	30, 1903.....	31,383
"	30, 1904.....	26,073
"	30, 1905.....	30,819
"	30, 1906.....	41,869
Nine months ended March 31, 1907.....		21,647
Year ended March 31, 1908.....		30,424
" " 31, 1909.....		39,081

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STATEMENT showing the number of Homestead Entries made during the fiscal year ended March 31, 1909, and the Nationality of the Homesteaders, as reported by the several Agencies of the Department in Manitoba, Saskatchewan, Alberta and British Columbia.

Nationalities.	No. of Entries.
Canadians from Ontario	4,038
“ “ Quebec	790
“ “ Nova Scotia	212
“ “ New Brunswick	91
“ “ Prince Edward Island	93
“ “ Manitoba	1,494
“ “ Saskatchewan	2,372
“ “ Alberta	1,048
“ “ British Columbia	131
Persons who had previous entry	3,267
Newfoundlanders	5
Canadians returning from the United States	693
Americans	9,829
English	5,649
Scotch	1,310
Irish	506
French	487
Belgians	167
Swiss	49
Italians	26
Roumanians	123
Syrians	28
Germans	650
Austro-Hungarians	3,342
Hollanders	92
Danes (other than Icelanders)	116
Icelanders	231
Swedes	596
Norwegians	656
Russians (other than Mennonites and Doukhobors)	947
Doukhobors	4
Chinese	6
Japanese	4
Persians	4
Australians	13
Hindoos	2
Spaniards	3
Bulgarians	5
Servians	2
Total	39,081

Representing 93,852 souls

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STATEMENT showing the number of Homestead Entries made during the fiscal year ended March 31, 1909, by persons coming from the various States and Territories of the American Union.

States.	No. of Entries.
Alabama.. . . .	1
Alaska 12, Arizona 4.. . . .	16
Arkansas.. . . .	8
California.. . . .	79
Carolina, North.. . . .	9
Colorado.. . . .	25
Columbia, District of	2
Connecticut.. . . .	10
Dakota, North.. . . .	3,921
Dakota, South.. . . .	415
Delaware.. . . .	1
Florida.. . . .	4
Idaho.. . . .	115
Illinois.. . . .	327
Indiana.. . . .	123
Indian Territory.. . . .	2
Iowa.. . . .	440
Kansas.. . . .	146
Kentucky.. . . .	16
Louisiana.. . . .	3
Maine.. . . .	30
Maryland.. . . .	8
Massachusetts.. . . .	91
Michigan.. . . .	497
Minnesota.. . . .	1,826
Missouri.. . . .	144
Montana.. . . .	263
Nebraska.. . . .	198
New Hampshire.. . . .	10
New Jersey.. . . .	5
New Mexico.. . . .	5
New York.. . . .	171
Ohio.. . . .	121
Oklahoma.. . . .	96
Oregon.. . . .	118
Pennsylvania.. . . .	108
Rhode Island.. . . .	7
Tennessee.. . . .	12
Texas.. . . .	20
Utah.. . . .	76
Vermont.. . . .	9

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States.	No. of Entries.
Washington..	462
Virginia, West..	19
Wisconsin..	536
Wyoming..	27
	<hr/> 10,522

STATEMENT showing the number of Letters-Patent issued by the Department of the Interior in each year since 1874.

Period.	Number issued.
Year ended October 31, 1874..	536
“ “ 31, 1875..	492
“ “ 31, 1876..	375
“ “ 31, 1877..	2,156
“ “ 31, 1878..	2,597
“ “ 31, 1879..	2,194
“ “ 31, 1880..	1,704
“ “ 31, 1881..	1,768
“ “ 31, 1882..	2,766
“ “ 31, 1883..	3,591
“ “ 31, 1884..	3,837
“ “ 31, 1885..	3,257
“ “ 31, 1886..	4,570
“ “ 31, 1887..	4,599
“ “ 31, 1888..	3,275
“ “ 31, 1889..	3,282
“ “ 31, 1890..	3,273
“ “ 31, 1891..	2,449
“ “ 31, 1892..	2,955
“ “ 31, 1893..	2,936
“ “ 31, 1894..	2,553
“ December 31, 1894..	2,682
“ “ 31, 1895..	2,118
“ “ 31, 1896..	2,665
“ “ 31, 1897..	2,972
“ “ 31, 1898..	3,037
“ “ 31, 1899..	3,904
Six months ended June 30, 1900..	1,970
Year “ 30, 1901..	6,461
“ “ 30, 1902..	8,768
“ “ 30, 1903..	7,349
“ “ 30, 1904..	6,890
“ “ 30, 1905..	8,798
“ “ 30, 1906..	12,370
Nine months ended March 31, 1907..	10,596
Year ended March 31, 1908..	18,690
“ “ 31, 1909..	22,431

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STATEMENT showing number of homestead entries granted in the provinces of Manitoba, Saskatchewan, Alberta and British Columbia, for fiscal year 1908-9, as compared with fiscal year 1907-8.

Provinces.	1908-9	1907-8	Increase.	Decrease.	Total 1908-9.	Total 1907-8.	Increase 1908-9.
Manitoba—							
Winnipeg.	1,863	886	977	.....		
Dauphin.	1,727	772	955	.....		
Brandon.	137	71	66	.....		
	3,727	1,729	1,998	.....	3,727	1,729	1,998
Saskatchewan—							
Part of Brandon in Sas-							
katchewan.	34	19	15	.....		
Yorkton.	2,169	2,839	.....	670			
Estevan.	833	502	331	.....		
Regina.	1,553	1,653	.....	100			
Humboldt.	2,412	2,493	.....	81			
Prince Albert.	2,058	1,622	436	.....		
Moosejaw.	8,710	5,181	3,529	.....		
Battleford.	3,383	4,535	.....	1,150			
	21,154	18,844	4,311	2,001	21,154	18,844	2,310
Alberta—							
Calgary.	2,707	1,278	1,429	.....		
Lethbridge.	3,818	2,456	1,362	.....		
Red Deer.	2,080	1,825	255	.....		
Edmonton.	5,166	4,055	1,111	.....		
	13,771	9,614	4,157	.....	13,771	9,614	4,157
British Columbia—							
Kamloops.	409	195	205	.....		
New Westminster.	29	42	.....	13			
	429	237	205	13	429	237	192
Grand total for fiscal year 1908-9.					39,081		
" " " 1907-8.						30,424	
Net increase " " 1908-9.							8,657

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CORRESPONDENCE.

The following statement shows the number of letters received and sent by the department in each year since its establishment.

Departmental Year ended October 31.	Letters Received.	Letters Sent.	Total.
1874.....	3,482	4,120	7,632
1875.....	1,974	2,189	4,163
1876.....	2,256	3,097	5,353
1877.....	3,137	3,677	6,814
1878.....	4,642	6,009	10,651
1879.....	5,586	6,179	11,755
1880.....	8,222	9,910	18,162
1881.....	13,605	15,829	29,434
1882.....	25,500	30,300	55,800
1883.....	27,180	33,500	60,680
1884.....	27,525	33,386	60,911
1885.....	33,970	43,997	77,967
1886.....	60,964	67,973	128,937
1887.....	47,845	60,890	108,735
1888.....	43,407	52,298	95,705
1889.....	48,316	50,500	98,816
1890.....	36,200	36,008	72,208
1891.....	38,000	36,267	74,267
1892.....	41,990	42,203	84,193
1893.....	50,794	48,145	98,939
1894.....	48,619	50,840	99,459
1895.....	49,991	45,898	95,889
1896.....	47,501	44,238	91,739
1897.....	65,714	64,147	129,861
1898.....	88,913	87,845	176,758
1899.....	95,023	91,876	186,899
1900.....	121,219	133,177	254,396
1901.....	144,978	136,348	281,326
1902.....	167,200	185,548	352,748
1903 (From June 30, 1902, to July 1, 1903).....	185,582	223,463	409,045
1904 (From June 30, 1903, to July 1, 1904).....	222,316	274,675	496,991
1905 (From June 30, 1904, to July 1, 1905).....	245,470	302,723	548,193
1906 (From June 30, 1905, to July 1, 1906).....	407,794	529,465	937,259
1907 (From June 30, 1906, to April 1, 1907).....	372,231	620,968	993,199
1908 (From March 31, 1907, to April 1, 1908).....	543,647	1,106,772	1,650,419
1909 (From March 31, 1908, to April 1, 1909).....	721,217	1,114,380	1,835,597

The number of registered letters during the departmental year ending March 31, 1909, was: received, 14,504; sent, 42,790.

STATEMENT of Land Sales by Railway Companies having Government

YEAR.	HUDSON'S BAY COMPANY.		CANADIAN PACIFIC RAILWAY COMPANY.		MANITOBA SOUTH-WESTERN COLONIZATION RAILWAY COMPANY.		QU'APPELLE, LONG LAKE AND SASKATCHEWAN RAILROAD AND STEAM-BOAT COMPANY.	
	Acres.	Amount.	Acres.	Amount.	Acres.	Amount.	Acres.	Amount.
		\$		\$		\$		\$
1893.....			93,184	295,288	14,164	57,559	1,603	
1894.....	7,526	48,225	43,155	131,628	6,312	28,003	640	
1895.....	4,431	23,209	55,453	176,950	5,623	22,330	2,391	
1896.....	9,299	52,410	66,624	220,360	21,254	88,568	286	
1897.....	10,784	53,277	135,681	431,095	63,800	234,644	2,524	
1898.....	62,000	310,000	242,135	757,792	106,473	363,982	22,534	
1899.....	56,875	274,625	261,832	814,857	58,019	199,458	61,030	178,517
(Fiscal Year)								
1900.....	70,196	352,631	379,091	1,152,836	133,507	437,449	18,932	53,974
(Fiscal Year)								
1901.....	82,308	399,804	339,985	1,046,665	59,749	214,953	22,266	74,810
(Fiscal Year)								
1902.....	269,577	1,412,332	1,362,478	4,440,500	206,411	713,365	39,835	147,365
(Fiscal Year)								
1903.....	330,046	1,939,804	2,260,722	8,472,250	250,372	699,210	843,900	1,476,900
(Fiscal Year)								
1904.....	144,857	879,910	857,474	3,516,864	29,522	113,303		
(Fiscal Year)								
1905.....	139,721	865,905	411,451	2,045,800	80,342	296,936		
(Fiscal Year)								
1906.....	236,191	1,863,375	1,012,322	6,015,060	83,418	360,889		
(9 months to March 31, 1907).....								
1907.....	69,158	742,221	851,083	4,817,632	3,051	22,643	1,353	16,789
(Fiscal Year)								
1908.....	21,184	267,215	81,060	727,367	31,982	153,007	5,621	68,869
(Fiscal Year)								
1909.....	25,449	288,836	29,331	383,390	10,396	84,845	37,662	380,371
Total.....	1,539,602	9,773,779	8,483,061	35,446,334	1,164,395	4,091,146	1,060,577	2,397,595

* Returns not received in time for publication.

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Land Grants and by the Hudson's Bay Company.

CALGARY AND EDMONTON RAILWAY COMPANY.		CANADIAN NORTHERN RAILWAY COMPANY.		GREAT NORTHWEST CENTRAL RAILWAY COMPANY.		TOTALS.		AVERAGE PER ACRE.
Acres.	Amount.	Acres.	Amount.	Acres.	Amount.	Acres.	Amount.	
	\$		\$		\$		\$	\$ cts.
11,260						120,211	352,847	2 93
11,085						68,668	207,856	3 02
46,815						114,713	222,489	1 94
10,553						108,016	361,338	3 34
9,436						222,225	719,016	3 23
15,481						448,623	1,431,774	3 18
24,738	53,335					462,494	1,520,792	3 28
46,653	128,256					648,379	2,125,146	3 27
116,719	352,037					621,027	2,088,269	3 36
323,494	1,033,396					2,201,795	7,746,958	3 56
231,800	909,600	183,736	631,503	128,435	522,490	4,229,011	14,631,757	3 46
129,007	563,507	64,469	313,575	41,858	177,081	1,267,187	5,564,240	4 39
105,191	512,898	231,707	1,221,469	17,593	103,564	990,005	5,046,572	5 09
85,784	480,063	204,906	1,014,351	20,003	137,503	1,642,684	9,871,241	6 01
59,515	346,061	289,576	1,711,109	4,023	41,470	1,277,759	7,697,930	6 02
8,606	75,644	196,946	1,746,504	1,294	13,855	341,072	2,983,992	8 78
6,370	66,508	*	*	165	7,935	109,373	1,211,885	11 08
1,246,457	4,521,308	1,171,400	6,638,511	213,371	1,003,898	14,873,242	63,806,102	

LAND SALES.

As regards the sale of land by companies holding grants from the government, it will be observed that there has been a large falling off in the area disposed of, although the average price realized per acre shows a considerable increase as compared with previous years.

I am not aware of any particular reason for this falling off in the area of land sold. However, in view of the ever-increasing demand on the part of settlers with capital for free homestead land, it would have seemed reasonable to suppose that railway companies would have had a corresponding demand for their own lands, as settlers of the type who have been going to the west within recent years, especially from the United States, usually contemplate farming on a large scale. It may be that some of the larger railway companies did not find it to their advantage to place their lands on the market. If such be the case, it is certainly to be regretted in the interests of the country, and especially of the western provinces.

IMMIGRATION.

COMPARATIVE statement of arrivals at inland and ocean ports during the twelve years ending March 31, 1909.

ARRIVALS.

Year.	Great Britain and Ireland.	Other Countries.	United States.	Total.
1896-7	11,383	7,921	2,412	21,716
1897-8	11,173	11,608	9,119	31,900
1898-9	10,660	21,938	11,945	44,543
1899-1900	* 5,141	* 10,211	* 8,543	23,895
1900-1	11,810	19,352	17,987	49,149
1901-2	17,259	23,732	26,388	67,379
1902-3	41,792	37,069	49,473	128,364
1903-4	50,374	34,785	45,171	130,330
1904-5	65,359	37,255	43,652	146,266
1905-6	86,796	44,349	57,919	189,064
1906-7 (nine months ended March 31)	55,791	34,217	34,659	124,667
1907-8	120,182	83,975	58,312	262,469
1908-9	52,901	34,175	59,832	146,908
	540,621	400,617	425,412	1,366,650

The report of the Superintendent of Immigration will be found under Part II. of the general report.

I desire to call special attention to the very complete tables and statements which are again submitted by the superintendent, showing in detail the nationality, occupation and destination of all immigrant arrivals during the period covered by the report. These statistics have been prepared with extreme care and they supply a long-felt want in this relation, as the classification has been so systematized as to readily afford information in connection with any subject dealt with.

* Arrivals for six months only.

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As would appear from the foregoing table, there has been a large falling off in the total immigration during the past twelve months as compared with the previous year. It should be pointed out, however, that while the number of arrivals was less than that of last year, which was the largest in the history of the country, the average for the previous six years has been well maintained. In this relation it is satisfactory to note also that nearly one-half of the total male population which arrived in Canada last year was composed of farmers and farm labourers.

BRITISH IMMIGRATION.

The report of the Assistant Superintendent of Emigration at London sets out fully the work that has been conducted in Great Britain and Ireland during the past year, and, although there has been a large falling off in the number of British arrivals, it is gratifying to observe that most of the undesirable elements that have found their way to Canada in previous years have now been almost completely eliminated. This is due largely to the effect of the regulations that came into force in the spring of last year, restricting the emigration to Canada of persons assisted by charitable organizations, and there is no doubt that the results obtained have fully justified the change of policy which was then adopted.

There has been a falling off also in the number of continental arrivals, but this is not surprising, as ever since the termination of the arrangements that had been made for the dissemination of literature throughout various European countries the department has been unable, owing to restrictive laws in force in such countries, to undertake any work of propaganda.

It will be observed with pleasure, however, that there has been a slight increase in the number of arrivals from the United States. In fact, it has been the largest since the movement began in 1897, and it has even exceeded the number of arrivals from Great Britain. The class of settlers coming from the United States is composed chiefly of experienced agriculturists with capital, and the methods followed to engage such movements would appear to have proved so successful that it is proposed to continue the work with increased vigour in future.

IMMIGRATION FROM THE UNITED STATES.

As regards this class of immigration I wish to call particular attention to the report from Mr. W. J. White, inspector of agencies and press agent, which sums up in very striking form the results of the department's work in the neighbouring republic during the past twelve months. In view of Mr. White's close connection with this unprecedented movement of population ever since its inception in 1897, and his thorough knowledge of conditions which have brought it about, I am sure that his opinion will commend itself to all patriotic Canadians. The arrivals from the United States, as will be observed from the returns, were the largest from any one country during the past year, and of the 60,000 Americans who entered Canada every man, woman and child was possessed, on an average, of \$1,000 in stock, cash and effects. This large addition to our population represents a community composed of the most ex-

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perienced tillers of the soil, and although their traditions may be different from ours, it is gratifying to realize that they come here imbued with such sentiments, as regards the ideals of national life, as readily enable them to appreciate the benefits of Canadian citizenship.

IMMIGRATION FROM FRANCE AND BELGIUM.

COMPARATIVE Statement of Immigrant Arrivals from France and Belgium during the thirteen years ending March 31, 1909.

Year.	France and Belgium.
1897.	740
1898.	545
1899.	413
1900.	483
1901.	492
1902.	645
1903.	1,240
1904.	(1,534)—2,392—(858)
1905.	(1,743)—2,539—(796)
1906.	(1,648)—2,754—(1,106)
1907 (9 months).	(1,314)—1,964—(650)
1908 (to March 31)	(2,671)—3,885—(1,214)
1909 (to March 31).	(1,830)—2,658—(828)

It will be seen that there has been a falling off in the number of arrivals from France and Belgium during the past year. As explained by both Mr. Treau de Coeli, the Canadian government agent at Antwerp, and Mr. Paul Wiallard, our agent at Paris, while the total immigration has not come up to the figures of the previous year, those who have come to Canada belong to a better class of emigrants than ever before. However, considering that there has been a falling off in the number of arrivals from the British isles and other European countries, I think that the results of our work in France and Belgium are very satisfactory, especially when one considers that during the seven years ending 1903 there only arrived from those two countries 4,558 immigrants, whereas during the past five years and nine months this number was increased by 16,192. It is not as large, it is true, as could be desired, but it is strong evidence that our work is being prosecuted as energetically as the restrictive laws in force, especially in France, will permit.

JUVENILE IMMIGRATION.

From the report of Mr. G. Bogue Smart, chief inspector of British immigrant children and receiving homes, it will be seen that there is an increasing demand for juvenile immigrants, from the country districts in Canada. During the year 1907-8 there arrived 2,375 of these children, which was 920 in excess of the previous year, but large as this number was it could only supply less than one-seventh of the total demand on the part of farmers throughout the country.

The arguments put forth by Mr. Smart in favour of this class of immigration are indeed very forceful, supported as they are by the utterances of some of the most

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prominent men in the old country, as well as by the opinion of our own inspectors who keep continually in touch with the thousands of juvenile immigrants who have been placed in homes in Canada.

The system of inspection would appear to be as perfect as can be, and it is satisfactory to note that Mr. J. Obed Smith, the assistant superintendent at London, takes occasion to bear testimony to the excellence of the work conducted by the department in this relation.

SURVEYS.

During the year 7,412,870 acres of land were subdivided into sections, a somewhat larger amount than in the preceding year. Resurveys were also made of 1,000,960 acres; four hundred and sixty-seven miles of base lines, initial meridians, and various miscellaneous surveys were run.

Seventy parties in all were employed on the survey of Dominion lands, thirty-one of these working on subdivision surveys under contract and thirty-nine being paid by the day. The distribution of these parties by provinces is shown in the following table:—

Parties.	In Manitoba.	In Saskatchewan.	In Alberta.	In British Columbia.	In the Territories.	On the Boundary between British Columbia and Yukon Ter.	Partly in one province and partly in another.	Total.
Paid by the day.....	4	6	15	8	2	1	3	39
Under contract.....	7	8	15	.....	.....	.....	1	31
Total.....	11	14	30	8	2	1	4	70

Three hundred and twelve whole townships and twenty-three fractional townships were completely subdivided, while one hundred and sixty-one townships were partially subdivided.

Resurveys were made, either partial or complete, of one hundred and seventy-one townships. The large amount of resurvey now found necessary is chiefly owing to the fact that in many townships which were surveyed some twenty or thirty years ago the corner monuments, which were not of as durable a nature as those now used, have to a great extent disappeared. In many districts where lands had been surveyed there was but little settlement and the absence of monuments did not attract much attention till the large recent influx of settlers into these townships made it imperative to re-mark the corners, in order to enable them to locate their homesteads.

The base lines necessary as a preliminary for extending the township surveys were surveyed chiefly in the great almost vacant country lying west of Edmonton and east of the Rocky mountains, and comprise portions of the twelfth, thirteenth

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and fifteenth bases. The fifth initial meridian has also been extended northward as far as township 107, about three hundred and thirty miles north of Edmonton, and some twenty miles additional of the sixth meridian was surveyed.

The mileage surveyed during the twelve months was 24,502. This, divided among sixty-seven parties, three parties not being included owing to the nature of their work, gives an average of three hundred and sixty-six miles per party.

A number of townships were surveyed along the line of the Grand Trunk Pacific Railway, between the fifth and sixth initial meridians, extending as far west as the Athabaska river.

A demand having arisen for lands in southern Saskatchewan and Alberta in what was formerly known as the 'semi-arid' district, about one hundred and forty-five townships were subdivided in that region and it is expected that all the townships yet remaining unsurveyed will be subdivided next season. Then practically all the open prairie country will have been surveyed, and the land to be laid out for settlement in the future will be more or less wooded.

Mr. P. A. Carson continued the triangulation of the railway belt in British Columbia, south and west of Golden. Several new stations were fixed as reference points upon which subdivision or other surveys may be based or to which they may be connected.

Mr. A. O. Wheeler, with two sub-parties under Messrs. M. P. Bridgland and H. G. Wheeler, made an examination of vacant lands in the valley of the Columbia river in the railway belt, British Columbia, above and below Revelstoke and above Golden. The object of this examination was to determine the amount of land available for different purposes, such as fruit growing, ordinary farming, grazing or lumbering.

In view of the possible construction at an early date of a railway to Hudson Bay, it was deemed advisable to lay out into town lots the land surrounding the harbour at the mouth of Churchill river. This land had been reserved from sale and settlement by order in council dated July 23, 1906. The survey was made by Mr. J. E. Morrier. Sufficient lines were run and marked on the ground to permit of dealing with the lots and cancelling the reservation.

The investigation of water-powers in the western provinces was continued by W. Thibaudeau, C.E. His operations during the last season covered the southwestern part of Alberta.

The Yukon-British Columbia boundary, which is the sixtieth parallel of latitude, was established from Tatschenshini river to Takhini river by J. N. Wallace, a distance of about thirty-six miles.

Two parties were employed on irrigation surveys in southern Alberta, under the direction of the Commissioner of Irrigation. They were in charge of Messrs. P. M. Sauder and R. J. Burley.

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Hereunder is the usual table of subdivision or settlement survey work completed each year since the inception of the surveys, with the result of last season's operations added:—

Period.	Acres.	Number of Farms of 160 acres each.
Previous to June, 1873	4,792,292	29,952
1874	4,237,864	26,487
1875	665,000	4,156
1876	420,507	2,628
1877	231,691	1,448
1878	306,936	1,918
1879	1,130,482	7,066
1880	4,472,000	27,950
1881	8,147,000	50,919
1882	10,186,000	63,662
1883	27,234,000	170,212
1884	6,435,000	40,218
1885	391,680	2,446
1886	1,379,010	8,620
1887	643,710	4,023
1888	1,131,840	7,074
1889	516,968	3,231
1890	817,075	5,106
1891	76,560	476
1892	1,305,200	8,720
1893	2,928,640	18,304
1894	300,240	1,876
1895	406,240	2,539
1896	506,560	3,166
1897	428,640	2,679
1898	859,840	5,374
1899	1,022,720	6,392
1900 (first 6 months)	735,480	4,596
1900-1901	1,603,680	10,023
1901-1902	2,553,120	15,957
1902-1903	6,173,440	38,584
1903-1904	12,709,600	79,435
1904-1905	10,671,520	66,697
1905-1906	4,973,920	31,087
1906-1907 (9 months)	3,819,700	23,873
1907-1908	6,123,040	38,269
1908-1909	7,412,870	46,330
	137,840,065	861,495

THE ASTRONOMICAL BRANCH OF THE DEPARTMENT.

Under this branch come the work of the Dominion Observatory, the International Boundary Surveys, and the Geodetic Survey of Canada.

The Observatory is provided with instruments for carrying on observations and investigations in several lines of astronomy, astrophysics and geophysics.

The principal instruments are: the equatorial, aperture, 15 inches; focal length, 19 feet; with several auxiliary instruments which may be attached to it; the meridian circle, aperture 6 inches, focal length 7 feet, diameter of circles, 3 feet; the cœlostæt, primary mirror, 20 inches diameter; focal length of concave mirror, 80 feet; Bosch seismograph, registering photographically; Riefler standard clock; and a master-clock for operating the time service of the city.

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The attachments to the equatorial instrument include: a camera for solar photography, a stellar photometer, a filar micrometer for visual observation of double stars, a single prism and a three-prism spectrograph, both of which have been designed specially for use in determining the velocity of stars in the line of sight, and have been constructed in the observatory workshop; a stellar camera, which is permanently attached to the tube of the telescope. The meridian circle and the *cœlost*at have only recently been put in operation. The former is installed in the new wing to the west of the main building. Defects showed themselves in the foundations of the piers built to carry the instrument and its collimators, and they had to be rebuilt, and special drains made to carry off the water which accumulates there. Some alterations had also to be made to the instrument itself. The *cœlost*at is set up in a building to the north of the main building, with which it is connected by a tunnel. A spectrograph, placed in a room in the basement, receives the solar image formed by the *cœlost*at mirrors. The purpose of the instrument may be in general terms defined as the investigation of the variations in the light and heat of the sun, the conditions accompanying sun spots, &c.

The time system by which dials in the principal government buildings in the city are operated from the Observatory, has been satisfactory. An additional group of dials has been placed in the Royal Mint, the Archives Building and the Printing Bureau. There are now in operation in all 276 dials and 12 clocks.

Two observers were employed during the summer in the determination of latitudes and longitudes of points with the purpose of improving the existing maps of Canada. Twenty-seven of these astronomical stations were occupied, including points in British Columbia, Manitoba, Ontario, Quebec, New Brunswick and Nova Scotia. One observer was occupied during the summer in magnetic observations at outside points.

The observatory is not connected with the weather service. No meteorological observations are taken at it, except certain self-recording observations of the temperature and the variations of barometric pressure, which are required for the proper interpretation of the records of the seismograph, to separate the effects of atmospheric variations in producing tremors in the earth's crust from the effects of internal movements.

The joint international boundary survey, provided for by the treaty of 1906, of the 141st meridian (between Yukon Territory and Alaska) was continued during the summer of 1908. The meridian was prolonged, and governing points established, for a distance of 75 miles south from the terminal point of 1907, and a point was reached about two miles south of White river. Fifty-two miles of the line, southward from the crossing of Yukon river, was marked by permanent monuments of aluminum bronze. The operations of the survey also comprised the continuation of the triangulation and the topographic survey along the line, and 159 miles of precise levelling, northward from Whitehorse, along the Dawson road.

Mr. A. J. Brabazon, D.L.S., had charge in the field of the Canadian share of the work.

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The second annual report by the United States and British Commissioners for this demarcation was laid before parliament on February 22, last.

The operations for the coming summer will include the production of the line northward from Yukon river, and southward from the terminal point of last season, near White river, to the Natazhat Range, the continuance of the triangulation and the topographic survey, and the placing of the final monuments at, and northward from White river, on the portion of the line the permanent marking of which is most immediately needed.

The demarcation of the line separating the coast strip of Alaska from British Columbia and Yukon Territory is carried on under the Treaty of 1903, as interpreted by the Tribunal which met in London in that year, and under the supplementary agreement of 1905.

This demarcation is carried on in sections by United States and Canadian parties, working independently but accompanied by a surveyor of the other party when identification has to be made of mountain peaks or other boundary points.

United States parties were placed at the crossing of Alsek river and in the region east of Unuk river. Each of these parties was accompanied by a Canadian representative.

A Canadian party under Mr. J. D. Craig defined the boundary line on the south branch of the Iskut river (a large tributary of Stikine river), completed the topographical survey of the region about the head of Bradfield river, and, in part, made a triangulation to connect the survey on the south branch of the Iskut with the former survey on the Stikine. This triangulation he was prevented by long continued rains from completing.

A Canadian party under Mr. W. F. Ratz continued the topographical survey east of Stephens passage.

The survey of this region was left incomplete in the joint surveys made in 1893 and 1894, and the Tribunal of 1903, in selecting the mountains which the boundary line should follow, found themselves unable to reach a decision as regards the region lying between a certain mountain situated north of Taku river and another lying some forty miles north of the Stikine. The distance between these two mountains is about 130 miles.

By the agreement made between the governments in March, 1905, seven inter-visible peaks between the Taku and Whiting rivers, and one peak to the north of the southern terminal point of the undefined stretch, were chosen as boundary peaks, thus reducing the undefined stretch to about 70 miles. As to this, it was provided in the agreement that the commissioners after making the necessary survey should select, as the final boundary peaks, intervisible summits, no one of which should lie more than 2,500 metres away from the straight line joining the seventh and eighth of the peaks above mentioned. The carrying out of this agreement called for a very difficult

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topographic survey. The boundary line as defined in the agreement lies from ten to twenty miles from the coast, passing over an immense ice field out of which project the rocky summits of mountains reaching six to seven thousand feet or more above sea level. The coast line is bordered by a rugged range of little less height, and access to the interior is to be had only by a few narrow valleys and over the glaciers which discharge into them. Food, camp outfit and instruments have to be packed in on men's backs.

This survey was entrusted to Mr. W. F. Ratz, D.L.S., who in 1907 surveyed the southern part of this region from behind, penetrating westward from the Stikine river. In 1908 he entered from the west, from Holkham bay and its branches. The work of the two seasons completed the topographic survey of the whole region so that the commissioners have been enabled to select the peaks for the boundary, in accordance with the requirements of the executive agreement of 1905, and nothing remains to be done in this region but to make a triangulation survey connecting the selected peaks, so that the boundary may be properly described. It is hoped that this will be completed during the present year.

It is with great regret that I record the death of Mr. Ratz, which occurred in Ottawa on February 6, after a brief illness. Mr. Ratz was a graduate of the Ontario School of Practical Science, and was employed for some years in the Topographical Surveys Branch of the department. In 1905 he was transferred to the Boundary Surveys. Besides professional skill of a high order he possessed personal energy and practical ability which he proved by his successful management of the most difficult section of a difficult survey. His untimely death is a serious loss to the public service.

The re-survey of the 49th parallel which forms the international boundary from the Gulf of Georgia to the Lake of the Woods, was completed in 1907 from the sea to the summit of the main range of the Rocky mountains, with the exception of a short piece of triangulation in the Cascade range. This has since been finished, and work has been begun to the east of the Rocky mountains, under the direction of Mr. J. J. McArthur, D.L.S., who last summer surveyed one hundred miles of the line, beginning at Coutts, Alberta, and working eastward. Permanent monuments of cast-iron will be planted during the coming summer, to replace the old piles of loose stones of the original survey of 1872-75. These marks were placed at an average distance apart of three miles; the new monuments will be one mile and a half apart.

The re-survey of the boundary line between the provinces of Quebec and New Brunswick and the states of Maine, New Hampshire and Vermont, was continued. The initial point of the season's work was the monument at the source of St. Croix river. From this point the line (approximately a meridian) was surveyed to the St. John river, the vista cut through the woods, a plane table survey made of the country adjacent to the line, and permanent monuments placed. This re-survey and that of the 49th parallel were carried on under agreements between the governments of the United States and Great Britain, without special sanction of any treaty, the work being looked upon as merely a continuation or renewal of work already begun under treaty. As, however, it has been found necessary in many places not only to renew

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monuments formerly planted, but also to place intermediate ones, and as there were certain sections of the line which had been described by treaty, but had never been surveyed, it appeared desirable that a treaty should be negotiated providing for the systematic survey of the whole boundary line. Accordingly a treaty was negotiated between His Majesty and the United States, which was ratified on June 3, 1908, for the survey of the whole boundary from the Atlantic to the Pacific.

This treaty divides the line into eight sections, as follows:—

1. From the Bay of Fundy, through Passamaquoddy bay to the mouth of St. Croix river.
2. From the mouth to the source of St. Croix river.
3. From the source of St. Croix river to the River St. Lawrence.
4. Along the St. Lawrence river, through the Great Lakes, and along their connecting waters to the mouth of the Pigeon river in Lake Superior.
5. Along Pigeon river and other waters to the northwest angle of the Lake of the Woods.
6. From the northwest angle to the 49th parallel and along the latter to the summit of the Rocky Mountains.
7. From the summit of the Rocky Mountains, along the 49th parallel to the middle of the straits separating Vancouver island from the mainland.
8. Along the Straits of Georgia, Haro and Fuca to the Pacific Ocean.

Of the above sections, the second and the fifth were defined by former treaties, but have never been surveyed as the boundary. The first has been surveyed in part, and the fourth and the eighth have been laid down on charts but not referred to monuments. The other sections have been surveyed and marked with monuments, though in general with not a sufficient number to meet modern requirements. The treaty requires in the case of each section that the line be laid down on modern charts, as well as marked on the ground by monuments wherever that is practicable. Provision is made for the acceptance of the work done on certain sections under the executive agreements above referred to.

The survey of the fourth section in the St. Lawrence river and the Great Lakes is placed in the hands of the International Waterways Commission. Mr. O. H. Tittmann, superintendent of the United States Coast and Geodetic Survey, and Dr. W. F. King, chief astronomer of Canada, have been appointed commissioners for the carrying out of the treaty with respect to the other sections.

THE GEODETIC SURVEY.

Two observing parties for the measurement of the angles of the triangles were in the field during the whole season, but on account of the prevalence of dense smoke were unable to do much work. The district covered lies between Brockville and Toronto, extending back some thirty miles.

Reconnaissance surveys were conducted in the maritime provinces, in the province of Quebec, in western Ontario and along the international boundary west of Lake Superior. The latter reconnaissance was, in part, for a primary triangulation to

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control the survey of the international boundary along the Pigeon river. The reconnaissance in the province of Quebec, which covered all of that part of the province lying south of the St. Lawrence river from Montreal to a point thirty miles below the city of Quebec, together with a strip north of the river extending far enough back to secure high points to command the country to the southeast, was most gratifying in its results; an excellent system of quadrilaterals was secured and some large five and six-sided figures with central points.

In the maritime provinces reconnaissance has been satisfactory. The stations selected for the triangulation extend from Chamcook mountain in the southwest corner of New Brunswick to the northerly extremity of Cape Breton Island, embracing a district about fifty miles wide between those points, including the easterly portion of Prince Edward Island. Chamcook mountain is one of the primary triangulation stations of the United States Coast and Geodetic Survey and by it in conjunction with Trescott Rock, another primary station of the same survey, a direct connection is made with the Geodetic Survey of the United States.

In 1908, two Geodetic levelling parties were employed and a line of precise levels was carried from Coteau Junction, thirty-eight miles southwest of Montreal, to Fort Erie via Hamilton, and also from Hamilton to London. The computations are now in progress and are sufficiently advanced to show that the results are of a high order of precision.

Reference may be made to the report of the Chief Astronomer, Part No. IV. of this report, for fuller details of the work of the Astronomical Branch.

NATIONAL PARKS.

The national parks continue to grow in popularity, as shown by the large increase in the number of tourists and temporary residents who visited these charming resorts during the year. Over 39,780 persons visited Banff during the past fiscal year, as against 32,200 during the previous year, and 7,389 a decade ago. This increase of visitors was accompanied by an increase of revenue, the collections during the fiscal year closed amounting to \$31,321.20 as against \$27,232.87 in the previous year and \$2,994.16 during the fiscal year 1898-9.

The presence of 25,209 people at the Government Bath Houses during the year indicates very forcibly the need for more adequate bathing accommodation. The erection of a commodious bathhouse at the Hot Springs, equipped according to modern ideas, is a question which is being forced upon the department for early consideration.

Satisfactory progress has been made in the organization and systematization of the work connected with the national parks. Regulations based upon the Rocky Mountains Park Act have been revised and amended, and by order in council have been made to apply to the Rocky mountains, Yoho, Glacier and Jasper parks. It is expected that these regulations will facilitate the administration of these parks and afford increased protection to the game and fish within their precincts, as well as assist in the prevention of fire.

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The transfer of some 325 of the buffalo purchased from Mr. Michel Pablo, of Montana, in the year 1907, from Elk Island Park to Buffalo Park, situated near Wainwright on the Grand Trunk Pacific Railway, was successfully accomplished; as was also the delivery of another shipment of 190 head from Montana. The task of rounding up the latter, transporting them individually in specially constructed wagons to the loading point, and shipping them over nearly 1,300 miles of railway to their new home with insignificant loss, constituted a work of such magnitude as only the experienced eye witness can appreciate, and is probably without precedent in history. The work of rounding up the balance of this famous herd will be continued by Mr. Pablo during the present summer; and when this balance is delivered to Buffalo Park, together with the surplus stock from the Banff herd, Canada will possess the largest number of buffalo (or of any wild animals) within a single inclosure, in the world.

In consideration of the tide of travel to the Seattle Exhibition this summer, a profusely illustrated pamphlet setting forth the attractions of the Canadian National Parks has been issued. This pamphlet, entitled 'The Prince of Playgrounds,' is being freely distributed at the Seattle fair, and will doubtless divert a great deal of tourist traffic through the parks to view the wondrous beauties of this most providentially favoured region of Canada's dominions.

In the years 1904 and 1905 there were transferred to this department to be administered as public parks, a dozen islands in the St. Lawrence river lying between Brockville and Gananoque. These islands, with a single exception, were purchased from the Mississagua band of Alnwick and are reserved for recreative purposes. Upon six of the islands, which are well situated and beautifully wooded, pavilions have been erected and equipped with stoves, tables, benches, &c., and are under the care of a guardian.

The numbers of excursionists, picnic parties and other pleasure seekers visiting these islands would appear to justify their reservation from sale; and it will devolve upon this department to see that the pavilions and other conveniences are maintained in good sanitary condition and repair.

FORESTRY AND IRRIGATION.

The report of the Superintendent of Forestry and Irrigation for the year ended March 31 last, will be found under Part VII. of the general report.

The interest in tree planting still continues and the distribution of young trees for the past year was the largest yet recorded. In order to provide better facilities for handling this increased work, all applications for trees are now dealt with at the office at Indian Head, which is the headquarters of the Chief of the Tree Planting Division, and where the Forest Nursery Station is situated.

An important feature of the year's work was the removal of squatters from the forest reserves. This work is now practically completed, thus removing a great source of danger from fires within the reserves.

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The surveys of 'The Pines' and 'Riding Mountains' forest reserves have been completed and similar work is to be undertaken at an early date on the other reserves.

Systematic effort is being made to collect statistics regarding the forest resources of Canada and the annual production of timber, but the collection of such statistics is necessarily tedious, and it will be some time before the record is even approximately complete.

Continued attention has been given to the work of protecting the forests from fire and special efforts have been made to prevent, or control, fires along the line of railways now under construction.

Special attention is being given to stream measurements. This work was previously conducted as part of the irrigation administration, but has now been given a separate organization. This work is at present confined chiefly to the streams in southern Alberta and southwestern Saskatchewan, in the sub-humid or semi-arid district, but it is intended to extend it as rapidly as possible and ultimately to cover all of both provinces. The importance of this work cannot be over-estimated, as upon the water supply will depend, to a very large extent, the future development of a considerable section of the west, and an accurate knowledge of existing conditions should precede any attempt to improve them.

The greatest irrigation development during the past year has been in connection with the larger irrigation projects now under construction by chartered companies, although there has been some development in the Cypress Hills country by individuals.

SCHOOL LANDS.

In consequence of the comparatively poor harvest of the year 1907, and of the financial depression then existing, it was not considered expedient to hold any general auction sales of school lands in the provinces of Manitoba, Saskatchewan and Alberta during the season of 1908, and only a few isolated parcels were disposed of.

As you are aware, special legislation was recently obtained to enable the department to sell by private sales to boards of trustees the land required for school sites in school sections, instead of by public auction, as it was found that the expenses in connection with the auction sales of these small parcels, which were put up separately, were out of all proportion to the amount realized, and also involved a good deal of trouble and inconvenience to the school authorities.

Under the amendment to the Dominion Lands Act referred to, the department is now empowered to sell by private sale to boards of trustees the land required in school sections for school sites, provided that the application of the trustees is endorsed by the Minister or Deputy Minister of Education for the province, and that the parcel does not exceed four acres and fronts on a road allowance.

Under this provision of the Act a number of sales have already been made to trustees, and the system is found to work well.

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A number of sales were also made under the Railway Act to railway companies of school lands required for right-of-way and station grounds, ballast pits, and other purposes of the railway.

An important change was made during the fiscal year in the manner of renting school lands for grazing, grazing permits having been substituted for the grazing leases heretofore issued.

Under these leases great difficulty was experienced in collecting the rental, the lessees in many instances paying no attention to the notices sent them from time to time; and although the accounts were in all such cases then placed in the hands of the inspector for collection, he frequently found on visiting the land that the lessee was either absent, or claimed to be unable to meet the payment at the time, and as the sum involved was generally inconsiderable it was not worth while collecting by process of law, and it was consequently lost to the Crown.

Under a grazing permit, however, there can be no arrears of rental, as the permit is not issued until the rental is paid, and it lapses on April 1 in each year, and, while it is renewable from year to year at the option of the department, the renewal is not made unless application for the same is received on or before February 1, accompanied by the rental for the next year.

Where the applicant fails to renew the permit by the date mentioned, the department is at liberty to rent the land to the next applicant.

This system not only prevents any arrears accruing, but also saves a considerable amount of time in correspondence, and also does away with the necessity of keeping accounts in connection with the lands rented.

During the past fiscal year, prior to the issue of the grazing permit, 160 grazing leases were issued, and since then 291 grazing permits have been granted.

The net revenue from these grazing lands for the fiscal year was as follows:—

Manitoba.. . . .	\$1,125 67
Saskatchewan	9,103 89
Alberta.. . . .	9,552 41

The revenue from coal lands for the fiscal year was \$4,141.92.

The report of the Chief of the School Lands Branch shows that the net revenue, from all sources, from school lands during the fiscal year was as follows:—

Manitoba.. . . .	\$365,430 16
Saskatchewan.. . . .	172,754 90
Alberta.. . . .	143,440 40
Total.. . . .	<hr/> \$681,625 46

Of this sum \$642,985.87 was collected at head office, and the balance of \$38,639.59 through the various Dominion lands agencies.

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The expenditure for the fiscal year is as follows:—

Manitoba.. . . .	\$6,872 13
Saskatchewan	6,947 00
Alberta.. . . .	6,840 60
Total.. . . .	\$ 20,659 73

This sum is as nearly as possible 3 per cent of the net revenue, which I consider a very moderate amount for the administration of the school lands in the three provinces.

The balance to the credit of the several School Lands Funds on March 31, 1909, is as follows:—

Manitoba.. . . .	\$2,185,311 51
Saskatchewan.. . . .	850,398 41
Alberta.. . . .	452,123 39

In accordance with the orders in council in that behalf cheques were issued in favour of the Provincial Treasurer of each of the provinces of Manitoba, Saskatchewan and Alberta covering the revenue collected from school lands during the fiscal year other than principal moneys of sale, the amount paid over to each province on this account after deducting the cost of management being as follows:—

Manitoba.. . . .	\$108,895 41
Saskatchewan.. . . .	52,113 24
Alberta.. . . .	54,239 84

In addition to the foregoing, the following amounts were paid over by the Finance Department to the several provinces as interest on the fund for the fiscal year, namely:

Manitoba.. . . .	\$ 62,161 11
Saskatchewan.. . . .	24,289 14
Alberta.. . . .	12,790 09

YUKON TERRITORY.

Methods of mining in the Yukon Territory are gradually undergoing a very pronounced change. Individual effort by comparatively primitive methods is being replaced by combined operation with the most modern equipment, the results of which appear to be very satisfactory. Combination, with operations on a more extensive scale, has resulted in materially reducing the cost of production.

The water-powers of the territory are being utilized for the generation of electric energy for the operation of dredges, elevators, &c., and in all cases where possible, mechanical appliances are being substituted for manual labour, with very satisfactory results.

The gold production for the year shows a considerable increase, and it would appear that the completion by The Yukon Gold Company of their extensive water

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system, as well as the introduction of additional dredges and other forms of improved mining machinery, will result in a steady increase in the annual gold output of the territory.

Quartz prospecting operations appear to have been carried on with greater activity than in the past. A stamp mill is being installed at the head of Victoria gulch, where gold-bearing quartz has been found, and a concentrator has been erected, and is in full operation in the Conrad district, where discoveries were made some years ago, and where considerable development work has been performed.

Agriculture has now become a very important adjunct to the resources of the territory. While formerly all vegetables consumed in the territory were imported, now vegetables in abundance are being locally grown, and continuous cultivation would appear to increase the productiveness of the soil. Entries have been granted for a number of homesteads, and the cultivation of the soil appears in numerous cases to have been undertaken as a permanent occupation.

I have the honour to be, sir,

Your obedient servant,

W. W. CORY,
Deputy of the Minister of the Interior.

PART I.
DOMINION LANDS.

DOMINION LANDS.

No. 1.

REPORT OF THE COMMISSIONER.

DEPARTMENT OF THE INTERIOR,

OFFICE OF COMMISSIONER OF DOMINION LANDS,

OTTAWA, April 1, 1909.

W. W. CORY, Esq.,

Deputy Minister of the Interior,
Ottawa.

SIR,—I beg to submit my report for the twelve months ending March 31, 1909, on the Dominion Lands Branch of this department, together with the reports of the Inspectors of Dominion Lands Agencies and the agents of Dominion Lands for the several districts.

The following summary statement has been prepared of the work transacted during the period mentioned as compared with the corresponding twelve months during the previous year :—

	1909.	1908.
Number of files dealt with.. . . .	178,830	147,794
Letters written.. . . .	149,178	125,430
Triplicates.. . . .	96,707	80,014
Total letters.. . . .	245,885	205,444
Applications for patent—		
Number examined.. . . .	30,760	27,557
New applications	19,051	15,269
Certificates issued and notifications sent out.. . . .	20,256	15,215

I have the honour to be, Sir,
Your obedient servant,

J. W. GREENWAY,

Commissioner of Dominion Lands.

No. 2.

REPORT OF INSPECTOR OF DOMINION LANDS AGENCIES.

(J. W. Martin.)

OFFICE OF INSPECTOR OF DOMINION LANDS AGENCIES,

MEDICINE HAT, ALBERTA, May 15, 1909.

J. W. GREENWAY, Esq.,

Commissioner of Dominion Lands,
Ottawa.

SIR,—I have the honour to submit my annual report for the year ending March 31, 1909.

Prior to the 1st of February last, I was assistant inspector of Dominion lands agencies, assisting Mr. R. E. A. Leech, who had charge of the four provinces of Manitoba, Saskatchewan, Alberta and British Columbia; and on that date, I was appointed as inspector of agencies for the provinces of Alberta and British Columbia, and there-

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fore kept no records in my office of the business transacted throughout the west prior to that date. These records, however, were all carefully kept in the office of Mr. Leech, at Brandon, and as he will no doubt in his annual report give a statement of the business transacted by the agents, sub-agents and homestead inspectors throughout the west, I will not attempt to duplicate these statements. Mr. Leech's report will no doubt cover everything fully.

On the 1st of September last, the new Dominion Lands Act came into force, throwing the odd numbered sections at the disposal of the government open to settlement, and as this made it much easier for intending settlers to secure suitable homesteads, a large immigration commenced at that date, and a great number of quarter sections have been taken up since then. In the month of September, more quarter sections were disposed of than in any month since the land throughout the west became available for settlement. Since the 1st of September, on account of this large influx of intending settlers, and the tremendous volume of business transacted at the agencies, it has been necessary to increase nearly every office staff in my district, in order to cope with the current work successfully, which has, I am pleased to state, been accomplished.

Last year, the government saw fit to distribute seed grain to farmers throughout the west, on account of the scarcity of seed, and for several months I was at Edmonton assisting in the distribution of the grain. In order to distribute this satisfactorily, it was necessary to have most of the homestead inspectors in Alberta assisting the railway agents in distributing, and also for the purpose of seeing that the cars were arriving at the different distribution points promptly. The taking of the homestead inspectors for this work materially interfered with their regular duties, and their absence from their regular duties is still being felt. However, the work in this branch is increasing rapidly, and it was seen fit to appoint three new inspectors in Alberta, and I am very pleased to be able to state that the work is being caught up rapidly.

Most of the sub-agents have also been very busy, and it was necessary to increase the number of sub-agencies in Alberta materially, especially in the northern part of the province, as settlement has extended back. These sub-agencies have all been inspected regularly and, in most cases, the work has been carried on in a very satisfactory manner. As lands in certain localities are well settled, and people become entitled to patents, the work at the sub-agencies affected will be materially decreased, and it will be necessary from time to time to close up some sub-offices. It will also be necessary, on account of settlement extending a long way back in different directions, to open up new sub-offices, which the department so far has been very prompt in doing.

I have, during the fiscal year just ended, taken up quite a large number of special cases, or investigations, for the department, which have been dealt with promptly and satisfactorily on receipt of the necessary reports.

On account of the settlement which has taken place during the year in what is known as the Peace River country, I understand it is the intention of the department to establish an agency at Lesser Slave lake to attend to this district. This should be a great convenience to people who wish to settle in the northern part of the province, and no doubt from now on, as the land is being surveyed rapidly, a large proportion of intending settlers will visit that district for the purpose of taking up land.

It is expected that before the close of the next fiscal year, branch lines of railways now established through the west will have been run reaching through portions of the province of Alberta which are at present practically unsettled, and also into portions of the province in which, during the past year, settlers have been flocking, and which are at the present time a long way from a railway. These settlers went back into these remote districts with the expectation of having railway facilities in the near future, and a great many of them will apparently not be disappointed in this respect.

Indications point to a very large settlement the coming year, and I look for a large increase over the year just closed.

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In the past, a large area of coal land has been disposed of, and it is apparent from all information received, that coal mines are being opened up in all parts of the country for the purpose of supplying settlers with coal for domestic uses, and where these mines are close to railways, large quantities are being shipped to the cities and towns throughout the west. I have no doubt also that as the railway facilities are increased during the coming season, the quantity of coal mined next year will be largely increased over the past season.

This spring has been quite backward, there being a very large rainfall. However, all indications point to the crop being, if anything, above the average.

Your obedient servant,

J. W. MARTIN.

Inspector.

No. 3.

REPORT OF INSPECTOR OF DOMINION LANDS AGENCIES.

(*R. E. A. Leech.*)

OFFICE OF INSPECTOR OF DOMINION LANDS AGENCIES,

BRANDON, MANITOBA, June 12, 1909.

J. W. GREENWAY, Esq.,

Commissioner of Dominion Lands,

Ottawa.

SIR,—I beg to submit my report for the fiscal year ending March 31, 1909.

The past year has been one of great activity in the administration of Dominion lands in the west, due to the distribution of over a million and a quarter bushels of seed grain, and to the operation of the new Land Act, which became effective September 1, 1908, throwing all unalienated Dominion lands open to entry and also providing for pre-emption and purchased homestead entry on lands within a prescribed area.

The distribution of seed grain referred to is presented in concise form in a report I made to the Deputy Minister, July 20, 1908, a copy of which is appended hereto. I should, upon this point, add that on August 15, 1908, I closed the seed grain offices in Regina, shipping all the records to the Seed Grain Branch, Department of Interior, Ottawa, for the completion of the unfinished business.

The work of the land offices during the past year has been by far the largest yet recorded. The land entries for the twelve months totalled 54,254, which exceeded the previous high water mark, 1905-6, by 12,315.

The largest number of entries put through one land office in a month was 4,447; this was done at Moosejaw in the month of September, 1908, and more than doubled the past record for one month, which was held by Regina. The record for the largest number of entries put through a land office in one day is also held by Moosejaw, where on December 22 last, 724 entries were completed. Also the revenue has, this last year, exceeded the million dollar mark, and the previous record by \$358,574.30.

Foreign interest in the Canadian west has not in the least abated, and constant streams of settlers are arriving to take up the free government lands or to make purchases of other lands. These settlers are of a most desirable class, being well supplied with farming requirements or the means to procure the same.

INSPECTION OF OFFICES.

My inspections of the offices have been made and reported to you from time to time, and almost invariably the work has been found in good shape, the books and records well kept and the records in good order, and the routine work well up to date, though this has, in a number of cases, required considerable overtime work on the part of the office staffs.

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From the monthly reports received from the agents, sub-agents and homestead inspectors, and by constant travel, I am able to keep in close touch with the work.

During the past year I have travelled 51,121 miles by rail and 375 miles by team, making a total of 51,496 miles.

SUB-LAND OFFICES.

During the past year it has been deemed advisable to close the sub-land offices at Etoimami, Strassburg and Milestone, Saskatchewan, and Pincher Creek, Alberta.

New sub-land offices were opened at St. Paul de Metis, Pine Creek and Entwistle, in Alberta, and Gull Lake and Lanigan, in Saskatchewan. The reports of the inspections made of sub-land offices have been forwarded to you as they were made.

INSPECTION OF THE GOVERNMENT PARK RESERVATIONS.

In addition to the inspection of the land offices, I have also kept in touch with and inspected the Banff, Yoho and Rocky Mountains Parks. During the past winter it was deemed advisable to close the Yoho Park office; my report on this being forwarded at the time.

Attached also are the following comparative statements of the work :—

- A. Land offices, principal transactions.
- B. Sub-land offices, principal transactions.
- C. Homestead inspectors, principal work performed.

I beg to remain, Sir,

Your obedient servant,

R. E. A. LEECH,

Inspector of Dominion Lands Agencies.

REPORT ON DISTRIBUTION OF SEED GRAIN.

REGINA, SASKATCHEWAN, July, 20, 1908.

W. W. CORY, Esq.,

Deputy Minister of the Interior,
Ottawa.

SIR,—In connection with seed grain distribution work I beg to make an interim report, as follows :—

At the request of the Minister of the Interior I took charge of the distribution of seed grain in the provinces of Saskatchewan and Alberta, as per the agreements entered into between the Minister of the Interior and the representatives of the Saskatchewan and Alberta governments. In Ottawa, in the latter part of January and first of February, I arranged for the printing and distribution of notices and circulars, regarding the terms and conditions of the proposed seed grain distribution, forms of applications, liens, mortgages, &c.

On February 11 I arrived in Regina to open offices and organize a staff for handling the work. By the terms of the regulations governing the seed grain distribution, applications were to be made in duplicate before the secretary-treasurers of local improvement districts, Dominion land agents, sub-land agents, homestead inspectors, immigration agents or Northwest Mounted Police; the original to be immediately forwarded to my office, afterwards to be forwarded to the various land offices, or provincial authorities, for verification as to the interest of applicants in the lands described; the duplicate to be approved, or otherwise, by the council of the local improvement district and, subsequently, forwarded to me.

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In order to meet the requirements of section 13 of the agreements made in Ottawa, February 3, between the Minister of the Interior and the representatives of the Saskatchewan and Alberta governments, respectively, I was notified that Mr. D. S. McCannel was appointed to represent the Saskatchewan government, and Mr. George Stevenson was appointed to represent the Alberta government. Those representatives opened offices, convenient to my own, and their approval was had to all applications made by non-homesteaders, for the respective provinces, before seed was delivered.

In order to facilitate keeping an accurate and readily available record of applications, I prepared registers and divided the work by land districts. In those registers the following quotations are made :—

'Application Number,' 'Name,' 'Post Office Address,' 'Declaration of Land,' 'Original Application Received,' 'Amount Applied for,' 'Date Original Application sent Land Office,' 'Date Original Application sent Provincial Government,' 'Date Original Application received back,' 'Amount Finally Recommended,' 'Papers sent Railway Agent, giving date and Station,' 'Date Lien received from Railway Agent,' 'Amount of seed supplied, Wheat, Oats and Barley,' 'Amount charged to Government, Dominion, Saskatchewan, Alberta and Cash Sales.'

On February 13 the first applications were received. February 22 was the first date fixed for closing applications. The time for receiving applications, however, was extended from time to time and was, eventually, left open. The last application received was June 16, and seed was delivered on this application. Altogether, 16,615 applications were received and dealt with by this office.

As applications were finally approved they were listed for shipment under the stations at which the applicants desired their seed delivered. Each day, as the approved applications for any railway station made up a car lot of any given grain, a requisition was issued upon Mr. Charles C. Castle, Purchasing Agent, Winnipeg, for the shipment of the same.

The first of such requisitions was made February 28 for 26 cars, and daily requisitions, as required, were made subsequently during the shipping season. The last requisition was made May 13. The total requisitions are as follows :—

	Cars.
Wheat..	500
Oats..	482
Barley..	39

In addition to this, however, grain was shipped on the requisition of Hon. W. T. Finlay, for the province of Alberta, as follows :—

	Cars.
Wheat..	2
Oats..	14

which will also be accounted for through this office. In all 1,037 cars of seed were shipped out for distribution.

When seed was shipped by Mr. Castle, the shipping bills were sent to this office, invoices accompanying the same, which were noted in our records. To the shipping bill, for each car, were attached a delivery list with liens and mortgages for execution by the applicants before the railway agents at time of delivery, it being necessary to take a separate mortgage, or lien, for each kind of grain, owing to the deliveries being made at different times. For each car of seed the number of deliveries to be made to applicants varied from 20 to, in one instance, 121, requiring the execution of as many securities. The first shipping bills were received at this office March 11 and were for 67 cars, and on the same day were sent forward to the various railway agents (or in the case of flag stations, to homestead inspectors) with the necessary delivery lists, liens and mortgages attached; also, each applicant was notified of the seed being shipped. As it was important that applicants should be able to receive the seed as soon

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as it reached its destination, we made it the rule of the office that all the shipping bills should be sent forward, with lists, liens, mortgages, &c., on the day that they were received, and I am pleased to be able to report that while we received as high as 81 shipping bills in one day, none ever remained over night in our office.

Seed was delivered at 175 stations in Saskatchewan and 75 stations in Alberta, making 250 stations in all; and the quantities ranged from a very few bushels up to, in one instance, 32 cars at one station.

In accordance with the arrangements made with the Canadian Pacific and Canadian Northern Railways their agents made delivery of the grain at the railway stations, and had the necessary documents executed. This was a very important part of the work, and, on the whole, has been done in a satisfactory manner. Deliveries at flag stations were attended to by homestead inspectors.

Owing to the enormous amount of work in connection with deliveries, I arranged for homestead inspectors to supervise the work on all railway lines, allotting to each a certain territory which they attended to in addition to flag stations. By this means railway agents having heavy deliveries were given assistance. As the deliveries for each car were completed the railway agent was requested to give a 'return statement' showing the deliveries as they had been made, on a form provided, and attach thereto the securities taken. Up to the present time these 'returns' and securities have not all been received at this office, but they will probably reach a total exceeding 30,000 in number. A separate file was made for each applicant, to which was attached his application in duplicate, all correspondence in connection therewith, and the liens, mortgages or cash sale invoices taken in settlement for seed delivered.

As liens, mortgages or cash sale invoices are received they are entered into our 'out-turn' grain books and our 'application' register, and attached, to the proper application files. When all liens, mortgages or cash sale invoices relating to an application file are received, the file with the securities is immediately transferred to Ottawa in the case of homesteaders, and to the provincial authorities respectively in the case of non-homesteaders.

Duplicates of non-homesteaders' files are made and the same forwarded to Ottawa.

At the present time about 50 per cent of the files have been disposed of in the above manner.

UNSATISFACTORY SEED.

In every case where complaint was made about the seed supplied not being satisfactory, I immediately had an investigation made—in most instances by a deputy grain inspector—and where the seed, upon examination, was not thoroughly satisfactory, I immediately stopped delivery of the same and requested applicants who had received such seed to return it, when satisfactory seed would be substituted. Many complaints, however, proved to be not well founded, and more particularly in connection with oats.

The earlier deliveries of oats were western grown. Later, when English oats were being delivered, being of such superior quality, many became dissatisfied with the western oats they had received. Up to the present time, however, I have not had a complaint that the oats supplied have failed to grow satisfactorily.

I have had a few complaints of seed wheat not giving satisfactory germination, and am having each case thoroughly investigated. So far as these cases have been reported upon it is clearly evident that the seed was seriously injured by formalin treatment by the farmer previous to sowing.

ALLOTMENTS NOT CALLED FOR.

Considerable quantities of seed delivered to various points were not called for by applicants. These refer particularly to applications for barley. In the application form each applicant was asked to state whether, in the event of the kind of grain applied for not being available, he would be satisfied to have some other kind of grain substituted. Almost invariably applicants consented to this suggestion.

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In connection with barley it was found that only about one-third of the quantity required could be secured, and oats were therefore substituted on applications for barley. When those substituted oats arrived at destination points the farmers appeared to be disappointed in not receiving barley; and the season then being somewhat late, they, in a great many instances, preferred not to take oats. There were also many cases where people living long distances from the railway stations did not receive the notice of their grain being shipped, in reasonable time. Also, there were a number of cases where settlers had rivers and streams to cross to reach the railway station, and having to depend upon ferry crossings, which owing to high water, were unable to operate, they were disappointed in not being able to take the seed they required.

QUALITY OF SEED.

Out of 1,037 cars sent out for distribution the entire complaints received will only refer to about 15 cars, and of this number there does not appear to have been reasonable ground for complaint against more than eight cars, which is quite a small percentage of the entire shipments.

The seed, generally, appears to have been carefully inspected and well cleaned. I have scores of letters expressing appreciation and satisfaction, both as to quality of seed, prices for the same, and the manner in which the business was handled in connection with seed distribution.

Owing to the very short time between the commencement of seed grain distribution operations and seeding time it required a large office staff to handle the business. For three months my staff of about 35 in number worked every day from 7 a.m. until nearly midnight, and sometimes even later. I am pleased, however, to be able to report that each day's business was cleared up on the day it was received, and that no oversight or miscarriage appears to have occurred in connection with a single application.

SEED GRAIN DISTRIBUTION A NECESSITY.

While the distribution did not reach the proportion anticipated, there is no question as to the necessity for making the distribution. In many districts seed was not available, and settlers had not the means to purchase the same. Owing to the general financial stringency settlers were unable to borrow, even upon good securities. I believe I am well within the mark in saying that 500,000 acres have been seeded which would not have been were it not for the present seed grain distribution.

A considerable additional acreage would probably have been sown with inferior seed which would have given poor results. This upon an average crop return will yield an extra eight or ten million dollars to the crop returns for this year in the provinces of Saskatchewan and Alberta.

Attached hereto please find schedules as follows:—

1. The number of applicants by land districts to whom seed grain was advanced, and whether upon homesteaders' liens, seed grain mortgages or cash sales.
2. The number of applications rejected or cancelled, by land districts.
3. Statement of grain distributed at railway stations in Saskatchewan, showing the kind, quantities and grades of grain delivered.
4. Statement of grain distributed at railway stations in Alberta, showing the kind, quantities and grades of grain delivered.
5. A statement showing the total seed grain delivered.

I have the honour to be,

Your obedient servant,

R. E. A. LEECH,

Inspector of Dominion Lands Agencies.

N.B.—Railway agents in some cases not having sent in *final returns* of deliveries made, the figures in the schedules hereto in some cases are approximated, and will be subject to correction when completed returns are available.

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SCHEDULE No. 1.—NUMBER of applicants receiving seed grain and terms of settlement.

Land District.	Settlement by		Cash Sales.	Total.
	Liens.	Mortgages.		
<i>Saskatchewan.</i>				
Humboldt.....				
Battleford.....	1,472	302	21	1,795
Prince Albert.....	728	131		859
Regina.....	215	154		369
Yorkton.....	875	1,361	56	2,292
Moosejaw.....	1,501	2,100	84	3,685
Estevan.....	796	92	11	899
Brandon.....	259	1,025	17	1,301
	90	490	12	592
<i>Alberta.</i>	5,936	5,655	201	11,792
Edmonton.....	1,125	1,047	144	2,316
Lethbridge.....	90	27	13	130
Red Deer.....	216	314	24	554
Calgary.....	199	219	66	484
	1,630	1,607	247	3,484
Total.....				15,276

R. E. A. LEECH,
Inspector of Dominion Lands Agencies.

SCHEDULE No. 2.—STATEMENT showing the No. of applications rejected and cancelled.

Land District.	Cancelled Applications.
<i>Saskatchewan.</i>	
Humboldt	115
Battleford	157
Prince Albert	37
Regina	127
Yorkton	193
Moosejaw	78
Estevan	80
Brandon	29
	816
<i>Alberta.</i>	
Edmonton	265
Lethbridge	23
Red Deer	119
Calgary	116
	523
Total	1,339

R. E. A. LEECH,
Inspector of Dominion Lands Agencies.

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SCHEDULE No. 3.—STATEMENT of Grain Distribution at Railway Stations in Saskatchewan.

Station.	Wheat.				Oats.				Barley.
	1 Nr.	2 Nr.	3 Nr.	4 Nr.	1 Wh.	2 Wh.	3 Wh.	Im-ported.	
Aberdeen	1,628							13	
Abernethy	1,250		1,750			777		355	
Alameda			6,207	1,050				1,785	
Antler	700		2,888	3,075		5,111		663	
Arcoia	2,750	1,050	4,905	4,858	336	2,960		683	
Asquith	1,050			1,309				1,170	
Balcarres	1,034	1,684	3,692			1,200		3,506	
Balgonie		2,232	3,436			1,800		2,013	348
Battleford		2,234	3,924	1,900		5,502		3,650	
Belle Plain			220					380	
Benito			1,050					2,035	
Bethune	1,000			1,419				1,214	
Bienfait		113	4,146					2,746	
Birch Hills		113						1,046	
Bladworth			1,530					970	
Blucher	700			467				1,536	
Borden			905					490	
Bredenbury		205						297	159
Bresaylor		30						180	
Broadview	676		454	1,016				1,565	300
Bruno		200	1,090					1,102	
Buchanan			1,016					6,896	
Canora	830	2,324	2,966	1,008		1,722		29,022	1,187
Carievale		1,000	615					500	
Carlyle			3,196	9		1,710		235	
Caron			1,000					1,620	
Carnduff			1,181					640	
Chamberlain			1,727		89		1,050	861	
Churchbridge	650		902	710		1,800		2,095	429
Condie	1,050		200					55	
Craik			2,425	350		1,236		810	
Creelman	1,922	968	3,357	134		1,800		1,235	
Cupar	1,050	397	3,071	2,200		6,625		635	
Dana			2,448					2,247	
Davidson	1,050	1,050	2,628	3,044		1,836		3,620	1,250
Disley			1,040	609				379	
Drinkwater	253		640					2,678	
Dubuc	180	650	3,147	1,100		1,170		3,216	
Dundurn				1,785				1,084	
Duck Lake	115	115						157	
Earl Grey			3,617					1,018	
Elstow			1,553					1,352	
Ebor			455					72	
Englefeldt			653					1,400	175
Esterhazy	1,000			2,984		1,200		699	
Estevan	1,080	1,309		1,050				1,715	
Fairlight	1,218	128	745					1,425	
Fielding				262				225	
Fillmore			2,635	668		1,791		1,866	
Fleming	370							460	40
Foam Lake			443			2,228			174
Forget	2,008	3,736	8,199	5,087		8,038		200	1,250
Francis		2,072	3,864	1,050		200		1,939	
Frobisher	3,470	2,432	2,050	807		1,800		714	
Gainsboro	334		1,000	666		1,788		250	
Girvin			1,480					318	
Glen Ewen			2,930	682		173		1,382	
Govan		3,000	2,826	1,404		1,166		2,243	
Grayson	380	2,440	3,000	2,693		4,965		3,900	1,150
Grenfell			2,064	1,048		1,215		1,251	385
Gull Lake	972							2,160	
Hague			106						
Halbrite	1,000		1,670	1,400				1,325	
Hanley	637		1,082	261				775	
Harrowby			610					604	
Herbert	506	244	1,292			1,199		301	364

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SCHEDULE NO. 2.—STATEMENT of Grain Distribution at Railway Stations in
Saskatchewan—Continued.

Station.	WHEAT.				OATS.				Barley.
	1 Nr.	2 Nr.	3 Nr.	4 Nr.	1 Wh.	2 Wh.	3 Wh.	Im-ported.	
Heward.....			489	1,110		1,200		1,052	
Hirsch.....	2,050	3,870	3,449			2,157		641	
Hitchcock.....			605					245	
Humboldt.....			2,800					4,791	10
Indian Head.....		648	2,368					1,973	164
Insinger.....			575					1,200	13
Invermay.....		325						5,441	
Kaiser.....			1,632			1,239		1,103	
Kamsack.....	1,050			67				9,390	
Kenaston.....	792			1,038				1,083	
Kennedy.....				850				483	
Killaly.....		516	1,112					1,798	
Kinistino.....		310						610	
Kisbey.....			1,314	3,010				1,952	
Kronau.....			100			1,320		548	
Kuroki.....		24	92					1,775	158
Lang.....			229					899	
Langenburg.....	1,597	996	692	1,573		7,986		1,205	682
Langham.....			202	129				170	
Lanigan.....	2,234		1,609			3,600		2,490	900
Lashburn.....	846	954	796			2,354		2,348	588
Lenberg.....	1,116		1,000	758		128		2,646	
Lipton.....	3,503	1,040	5,126	2,086		1,839		8,312	
Lockwood.....	1,050		127					674	
Lloydminster.....	1,070		2,280	1,000		3,621		9,712	2,705
Lumsden.....			1,624	978				610	
Macoun.....	2,086	1,314	4,029	988		3,555		192	594
Maidstone.....			1,239					1,767	147
Manor.....		975	3,379	1,105		1,890		1,329	
Maple Creek.....								202	
Marshall.....			566	999				1,885	524
Marchwell.....			1,394			1,800		654	
Margo.....		34						1,200	101
Maymont.....			968	75				514	
Melfort.....			1,050					2,965	
Midale.....	148	852	1,502					1,547	
Milestone.....			1,475			2,949			
Moosejaw.....			1,050			1,701		320	
Moosomin.....			1,970					897	210
Morse.....			1,032			1,800		618	110
Mortlach.....	1,038		1,020	1,732		3,597		2,984	402
Muenster.....			2,160			2,607		1,512	440
McDowell.....								236	
McLean.....		1,050	366					1,540	140
McTaggart.....			490					180	
Neudorf.....		214	786	1,050		800		177	
Nokomis.....	2,138	596	1,058			3,270			
North Battleford.....				977				1,194	
North Portal.....			120					200	
Orcadia.....			260			3,379		1,500	70
Osage.....		3,100	912					1,897	
Osler.....		55						104	
Oxbow.....	1,306		1,298	440				1,078	
Parkbeg.....			240					120	10
Pasqua.....			462					630	
Paynton.....		956						1,413	119
Pense.....								80	
Pilot Butte.....			95					320	50
Prince Albert.....		55						405	
Qu Appelle.....		932	1,816			1,158		757	390
Quill Lake.....			747			1,903		3,032	692
Radisson.....	1,100		1,051	520				756	
Redvers.....	2,340	1,970	3,003	1,000		3,651		1,800	1,050
Regina.....		970	4,436	1,100				4,354	
Rocanville.....			528					462	
Roche Perceé.....			25					78	50

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SCHEDULE No. 3.—STATEMENT of Grain Distribution at Railway Stations in
Saskatchewan—Continued.

Station.	WHEAT.				OATS.				Barley.
	1 Nr.	2 Nr.	3 Nr.	4 Nr.	1 Wh.	2 Wh.	3 Wh.	Im- ported.	
Rokeby				324		5,895		3,620	211
Rouleau	947	1,030						1,419	
Rush Lake			100					300	
Saltcoats		1,878	2,996	1,026		13,153		9,639	716
Saskatoon	1,986		1,025	958				3,782	
Sedley			2,860					2,521	
Shebo	1,438		13			3,600		4,352	598
Sintaluta			1,052					330	100
Southey		687	532	768		2,297		44	
Springside			372			1,800		3,168	235
Star City	653		644					4,003	
St. Gregor			473					775	38
Stockholm		996	159					1,565	2
Stoughton	1,050	1,024	4,865	1,556		3,750		1,926	
Strassburg			1,319			430		289	
Swift Current		3,124	2,230			3,410		4,186	
Summerberry								78	180
Tantallon			535					562	
Theodore		979	138			2,578		5,365	103
Tiny		72						2,280	
Tisdale	177		1,050	110		1,800		3,069	
Togo		1,760				1,911		6,395	
Tuxford	302		974	1,778				1,842	155
Tyvan			1,976	2,028				875	
Verigin				1,428				8,321	
Vonda		932	1,131					1,583	
Wadena	674		2,093	7,164				14,982	1,240
Walpole			655					805	
Wapella		4	1,576	1,209				1,212	241
Warman				145				696	
Watson	972	1,448	2,110	368		517		7,213	
Wauchope	1,048	1,030	2,010	1,000		1,909		2,383	
Wawota			300					325	
Welwyn			470					330	
Weyburn	1,002		4,215					2,848	
Whitewood		1,090	1,137	222		1,530		155	170
Windthorst	1,658		5,880	3,698		3,693		3,014	1,271
Wolseley			2,000	1,100		2,400		255	465
Yellow Grass	196	2,140	1,668			3,026		470	
Yorkton	398	1,362	2,212			30,711		9,520	902
Total	66,013	74,668	229,506	87,289	425	202,873	1,056	333,492	21,154

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SCHEDULE No. 4.—AMOUNT of Grain Distributed at Railways Stations in Alberta.

Station.	WHEAT.				OATS.				Barley.
	1 Nr.	2 Nr.	3 Nr.	4 Nr.	1 Wh.	2 Wh.	3 Wh.	Im-ported.	
Airdrie.			25					572	50
Alix.			9			558		120	306
Bawlf.		314	394			675	1,866	1,392	
Bassano.						63			
Blackfalds.			8			270			62
Bowden.			289			1,920		1,645	351
Bow Island.	60					110			
Bruderheim.								115	
Calgary.			44					2,709	378
Camrose.		522				1,634		1,858	740
Canmore.								251	
Cardston.		55			116				
Carstairs.			64					2,001	120
Cayley.								1,822	
Chipman.			8					120	14
Clareholm.	470					265			
Cochrane.			75			1,200		25	
Coleridge.	46					125		1,781	401
Cowley.		95				736			
Crossfield.	100		65					700	160
Daysland.	1,060	776				810		2,526	512
Didsbury.			202			1,800		1,200	854
Edmonton.			500					3,590	353
Fort Saskatchewan.	524							4,832	748
Gleichen.		120	30			85		100	
Granum.						1,690		12	
Grassy Lake.	15					10			
Hardisty.			522					3,201	200
High River.		680				8,639		774	
Innisfail.			680			8,466		149	1,789
Islay.			1,122					4,000	461
Innisfree.			1,122			1,800		267	258
Irvine.	442					717		10	
Killam.		306	710			582	1,200		180
Kitscoty.			880					1,605	242
Lacombe.			165			2,766		175	648
Lamont.			304					2,702	404
Lavoy.			154					1,507	145
Langdon.						770		698	30
Leduc.	178							11,591	1,188
Lloydminster.								64	
Lougheed.								28	
Lethbridge.		72				208			
Manville.			537	894				5,089	613
Medicine Hat.		712						1,467	
Millet.	180					1,399		1,330	
Midnapore.								78	
Morinville.			5,372					1,699	569
Morley.								199	
Morningside.			35			915		20	216
Mundare.			280					1,132	111
Macleod.		430				160			
Nanton.	250	100				2,858		475	
Ohaton.		360				1,249		1,219	365
Okotoks.		10				403		502	
Olids.			199			1,842		4,388	660
Penhold.			14					568	139
Ponoka.		332				1,716	1,893	5,761	1,250
Pincher.								10	
Ranfurley.			105			380		455	20
Red Deer.		700				1,906		3,354	668
Sedgewick.		301				764		40	112
St. Albert.			55					3,928	24
Sheppard.	446					855			
Stettler.		214	786					1,289	759
Stony Plain.			313					1,240	156
Strathcona.			128			677		3,865	1,086

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SCHEDULE No. 4.—AMOUNT of Grain Distributed at Railways Stations in Alberta—
Continued.

Station.	Wheat.				Oats.				Barley.
	1 Nr.	2 Nr.	3 Nr.	4 Nr.	1 Wh.	2 Wh.	3 Wh.	Im-ported.	
Staveley.....						302			
Taber.....	129					174			
Strathmore.....			98			385			
Tees.....			28			1,768			185
Vegreville.....			936					4,746	517
Vermilion.....	1,000		1,626		345	1,458		8,922	1,742
Walsh.....	160					185			
Wetaskiwin.....	686				1,932	5,031	2,898	1,904	1,110
Total.....	5,746	6,099	17,934	894	2,393	60,323	7,848	110,522	20,886

SCHEDULE No. 5.—STATEMENT showing total Grain Distributed in Saskatchewan and Alberta.

Province.	WHEAT.				OATS.				Barley.
	1 Nr.	2 Nr.	3 Nr.	4 Nr.	1 Wh.	2 Wh.	3 Wh.	Im-ported.	
Saskatchewan.....	66,013	74,668	229,506	87,282	425	202,873	1,056	333,492	24,154
Alberta.....	5,746	6,099	17,984	894	2,393	60,323	7,848	110,522	20,886
Total.....	71,759	80,767	247,490	88,176	2,818	263,196	8,904	444,014	45,040

Total wheat	488,192
" oats.....	718,932
" barley.....	45,040
	<hr/> 1,252,164

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A.—DOMINION Land Agencies, principal transactions

Agencies.	Homestead Entries granted.	LAND SALES			Applica- tions for Patent Received.	Land Entries Cancelled.	Timber Permits Issued.	Hay Permits Issued.
		Ordinary.	Pre-emp- tions.	Purchased Home- steads.				
Battleford	3,371	25	863	138	1,806	1,755	356	110
Brandon	171				324	53	460	26
Calgary	2,708	263	1,826	115	1,349	715	677	135
Dauphin	1,729	33			386	329	1,432	90
Edmonton	5,242	53	40	3	2,070	2,137	1,853	262
Estevan	840	89	911	57	1,028	342	324	283
Humboldt	2,421	28	61	16	2,618	1,126	415	60
Kamloops	400	59			83	70		9
Lethbridge	3,820	209	2,656	71	1,201	1,290	402	124
Moosejaw	8,720	338	7,227	249	1,988	2,988	756	429
New Westminster..	32	13			30			
Prince Albert.. .	2,079	42	57	52	863	755	1,357	176
Red Deer.. . . .	2,080	54	128	22	1,042	1,109	423	28
Regina	1,556	90	438	107	2,743	737	315	254
Winnipeg	1,865	72			300	468	1,185	267
Yorkton.. . . .	2,183	99			1,462	963	568	89
	39,217	1,467	14,207	830	19,293	14,837	10,523	2,342
Compared with 1907-8.	37,855	1,112			11,948	17,370	8,333	1,490
Compared with 1906-7.	30,472	731			16,364	17,612	10,806	2,046

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for the Departmental Year ending March 31, 1909.

LETTERS.		REVENUE.		No. of Staff.	EXPENDITURE.	
Received.	Sent.	Scrip.	Total Scrip and Cash.		Salaries.	Disbursements.
		\$ cts.	\$ cts.		\$ cts.	\$ cts.
34,641	31,199	480 00	82,351 62	10	8,905 00	1,681 04
9,304	8,188	934 81	26,127 71	4	3,749 94	175 93
34,740	34,196	2,080 00	132,895 12	13	13,253 20	2,866 99
21,447	12,056	80 00	34,301 01	4	4,079 92	805 42
56,007	45,229	.....	87,532 48	25	16,381 68	2,143 54
13,887	12,125	.....	35,147 85	5	4,798 42	426 91
39,880	31,081	.....	35,052 89	7	4,957 29	2,176 70
4,400	3,876	1,394 89	19,766 27	3	3,394 96	214 79
31,574	24,962	.....	148,560 52	7	6,174 96	1,767 16
60,766	77,000	6,794 25	233,735 67	22	15,861 97	5,489 96
2,923	2,614	80 00	2,863 43	2	2,194 96	322 85
15,442	12,706	880 00	75,651 57	6	5,644 93	2,017 91
18,525	17,127	.....	38,400 31	6	5,774 98	871 19
37,489	34,660	.....	67,637 06	13	12,092 76	1,231 95
24,382	22,130	3,837 36	127,949 83	14	15,428 00	3,113 70
29,766	22,090	.....	39,812 29	7	6,479 88	611 89
426,173	391,248	16,561 31	1,187,785 63	148	129,172 85	25,917 93
378,556	292,881	4,280 61	829,211 33	132	96,251 78	18,220 02
373,911	329,444	7,648 15	773,222 65	124	112,887 48	22,073 00

R. E. A. LEECH,
Inspector of Dominion Lands Agencies.

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B.—DOMINION Land Sub-Agencies, principal work performed during the Departmental year ended March 31, 1909.

Name.	Place.	Applications for Homestead entry taken.	Applications for Patent taken.	Applications for Inspection taken.	Applications for Timber unit taken.	Applications for Hay Permit taken.	Amount remitted to Land office.	EXPENDITURE.		Remarks.
								Salary.	Postage and Commission.	
							\$ cts.	\$ cts.	\$ cts.	
Alton, W. W.	Leduc, Alberta.	66	81	46	43	6	767 70	275 00	10 14	Resigned March 1, 1909.
Tobias, S. J.	"	4	6	3	3		43 75	25 00	75	Appointed March 5, 1909.
Barker, R. T.	Macleod, Alberta.	277	174	116	26	16	7,148 75	600 00	33 76	
Barthol, J. F. P.	Canora, Sask.	643	211	222	129	28	7,679 30	600 00	56 85	
Bisbee, J. S.	Dubuc, Sask.	225	112	10	18	18	403 80	300 00	9 91	
Boggs, N. G.	Langkan, Sask.	125	387	55		1	1,262 00	175 00	16 01	Appointed Sept. 1, 1908.
Bowtell, Frank	Wainwright, Alberta.	124	34	32	5	5	1,392 00	525 00	4 70	Closed February 22, 1909.
Culp, Norman	"	24	10	3	2	2	258 25	62 70	3 84	Began March 9, 1909.
Brady, J.	St. Paul de Metis.	28	2	5	18	27	319 75	125 00	5 51	Three months work January to March, 1909.
Prinacombe, M. A.	Vermilion, Alberta.	470	115	210	59	6	4,877 15	300 00	54 50	
Butcher, H.	Westmor, Sask.	26	77	24	6	6	276 10	120 00	5 40	Three months work January to March, 1909.
Caldwell, M.	Sprague, Man.	46					460 00			
Campbell, A.	Trinitree, Alberta.	114	71	79	1	2	1,145 25	300 00	28 18	
Carroll, J. W.	Whitford, Alberta.	114	9	20	29	15	1,560 67	180 00	6 28	
Cocharan, L. B.	Medicine Hat, Alberta.	651	69	146	178	24	10,200 25	900 00	65 24	
Collier, D.	Edmonton.	8					80 00	25 00	40	Resigned October 1, 1908.
Cook, C. C.	Arco.	40	104	37	142	49	1,078 40	300 00	16 09	
Davidson, D.	Daysland, Alberta.	41	322	61	1	3	565 30	300 00	21 93	
DeCuninck, A.	Makinak, Man.	291	31	34	52	35	3,382 25	300 00	24 49	
Denovan, R.	Shelbo, Sask.	456	247	78	23	9	4,559 50	300 00	61 90	Resigned March 1, 1909.
Dickey, W. J.	Revelstoke, B. C.	10	2	1			65 00	300 00	2 12	
Dubois, M. J.	Duck Lake, Sask.	143	65	48	60	13	2,135 20	345 00	18 78	
Edgson, I. A.	Edison, Alberta.	73	47	10	135	8	1,204 16	300 00	10 91	
Elton, D. H.	Cardston.	11	9	5	3		150 75	100 00		Resigned July, 1908.
Wolf, Martin	"	12	8	5	9		147 25	75 00	1 56	Appointed October, 1908.
English, J. J.	Maple Creek, Sask.	492	22	40	34	33	7,279 00	450 00	50 00	
Forquison, Wm	Gull Lake, Sask.	829	6	123	153	69	9,758 00	420 00	53 08	
Gray, W. B.	Stettler, Alberta.	1,255	486	225	47	71	16,780 90	900 00	90 55	
Gunn, Peter	La St. Anne.	150	12	41	13	20	1,639 70	300 00	7 85	
Gwynn, J.	Kutawa, Sask.	186	194	105	12	11	1,888 00	360 00	25 14	Resigned January 1, 1909.
Harley, Hugh	Swan River, Man.	177	24	47	215	26	3,435 90	300 00		Appointed March 30, 1909.
Henry, J. P.	Pine Creek, Alta.							480 00	26 66	
Huggs, Rowland	N. Battleford, Sask.	334	166	102	28	30	3,984 20	100 00	4 16	
Holmes, W. F. G.	High River, Alberta.	11	77	19	4		184 00	100 00		
LaPointe, P.	Willow Bunch, Sask.	521	8	46	158	7	4,539 85	400 00	19 41	
Lobby, J. J.	P. Saskatchewan.	195	17	29	151	26	4,638 59	300 00	20 37	

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	142	12	3	79	11	1,794 93	690 00	14 52
Malcolm, H. A.								Appointed March 1, 1909.
Marshall, W. A.	1,217	171	177	105	135	15,523 25	325 00	86 23
Milburn, Wm.	612	134	125	88	35	9,285 00	600 00	55 37
Moore, O. S.	83	27	26	50	13	899 30	250 00	5 58
McDonald, J. S.	593	320	314	8	4	8,292 70	300 00	51 91
McDonald, G.	211	147	157	4	21	3,135 20	222 67	27 86
Davidson, Sask.						3,768 25	215 95	Resigned Sept. 17, 1908.
Davidson, Sask.						1,050 00	600 00	33 21
Davidson, Sask.						1,050 00	600 00	Began Sept. 8, 1908.
Roethorn, Sask.	268	403	74	15	98	13,701 39	300 00	179 28
McGregor, A. J.	633	169	106	104	98	13,701 39	300 00	40 81
McGregor, R.	2,214	883	727	4	91	39,745 40	300 00	9 25
MacKenzie W. L.	223	345	90	78	16	2,363 40	300 00	48 96
McKernan, Jas.	100	2	4	9	29	1,613 66	300 00	46 19
Newth, R.	305	330	222	6	19	3,630 00	480 00	81 67
Lipton, Sask.	411	150	109	60	20	5,216 25	600 00	
Lloydminster	615	398	230	24	24	17,484 70	600 00	
Hanley, Sask.	35	9		61	10	688 08	180 00	
Pine Valley, Man.	27	38	19			2,351 50	300 00	8 60
Moosomin, Sask.	144	90	66	26	2	2,351 92	300 00	25 66
Ponoka, Alberta	21	16	14		15	650 75	300 00	3 74
Wapella, Sask.	492	365	160	16	1	7,083 75	430 00	51 91
Nanton, Alberta	224	169	107	24	11	2,375 25	250 00	21 93
Vegreville, Alberta	29	36	15	3	3	342 30	50 00	3 79
Strasbourg, Sask.	104	187	78		7	1,155 30	125 00	11 95
Redvers, Sask.	12	153	35			475 50	480 00	7 19
Whitford, Alta.	174	75	18	97	10	1,923 80	420 00	15 79
Grenfell, Sask.	26	116	28	3	19	383 95	480 00	9 13
Lesser Slave Lake.	59	7	4	82	12	820 97	1,500 00	4 11
Lacombe, Alta.	180	74	85	46	22	2,478 05	450 00	29 69
Stuartburn, Man.	100	19	6	168	17	1,257 49	300 00	8 32
Weyburn, Sask.	150	186	105	10	27	2,171 30	950 00	11 90
Wardell, P. E.	704	391	96	2	28	15,385 00	325 00	48 27
Ward, D. A.	157	55	99	18	16	2,037 10	600 00	13 45
Wetaskiwin, Alta.	740	89	45	106	88	8,737 45	350 00	53 36
Herbert, Sask.	428	239	70	117	17	4,004 25	600 00	38 64
Melfort, Sask.	37	44	28	7	1	474 00	300 00	8 38
Indian Head, Sask.								
Compared with 1908.	19,422	9,057	5,449	3,080	1,387	290,053 82	25,296 32	1,829 95
"	13,380	6,875	8,504	3,543	1,258	175,541 16	24,474 07	1,515 41
"	18,627	6,267	6,400	2,786	900	225,697 80	20,428 53	1,512 41

R. E. A. LEECH,
Inspector of Dominion Lands Agencies.

C.—HOMESTEAD INSPECTORS Statement, showing principal work performed during the Departmental Year ended March 31, 1909.

Name.	Headquarters.	Land Inspections made.	Applications for Patent taken.	Miles travelled by Wagon.	Miles travelled by Rail.	Travelling and living Expenses for Self and Team.	Expenses for new and old travelling Equipment.	Remarks.
Axford, Fred.	Glenboro, Man.	253	110	4,402	3,024	1,015 21	\$ 89 25	3 months' seed grain; no report (Dec. to March); assistant inspector.
Bannerman, J. A.	Red Deer, Alta.	678	3	1,914	8,691	691 65		Resigned August 1, 1908.
Bell, Geo. A.	Edmonton, Sask.	111	41	1,272	1,371	364 85	91 85	2 months' seed grain.
Bowtell, H.	Vermilion, Alta.	447	203	7,184	2,669	1,065 89	29 37	Appointed January 20, 1909.
Brinkner, J. A.	Dead Moose Lake	74	60	827	1,999	280 61		2 months' seed grain.
Brooke, A. W.	Moosejaw, Sask.	327	352	2,518	1,234	762 25	54 65	2 months' seed grain; 1½ month Land
Bryant, T. W.	Calgary, Alta.	103	43	1,417	647	366 05	33 20	Office assistant agent.
Buchanan, D.	Minnedosa, Man.	256	223	4,079	2,799	907 85	26 50	1 month's seed grain.
Budgeon, M. B.	Prince Albert, Sask.	7	99	99	500	21 70	5 25	Appointed March 18, 1909.
Clouston, Geo. H.	Battleford, Sask.	258	209	4,728	1,417	679 09	117 75	1 month's work, February, 1909.
Coulter, R. J.	"	12		189	400	38 40		2 months' seed grain.
Cunningham, T. J.	Vegreville, Alta.	197	253	3,295	2,327	1,000 69	38 40	11 months' work; no March report.
Currie, A. B.	Kamloops, B.C.	593	117	2,531	7,184	1,110 35	2 00	Appointed July 25, 1908.
Darroch, E. J.	Swan River, Man.	92	117	1,865	480 72	1,016 38	34 00	2 months' seed grain.
Dodds, J. T.	Swift Current, Sask.	562	245	4,524	5,988	1,046 80	10 75	"
Dose, J. S.	Pakan, Alta.	146	91	4,461	835	1,046 80	8 75	"
Duggan, L. H.	Humboldt, Sask.	224	30	2,453	3,043	759 64	3 60	"
Gibson, J. S.	Brandon, Man.	293	74	2,121	6,360	557 91	28 50	Resigned February 28, 1909.
Gladstone, W. E.	Prince Albert, Sask.	133	115	2,042	3,295	691 95		Appointed January 30, 1909.
Grayson, Chas.	Cochrane, Alta.	68	20	534	595	150 45	14 95	Combined statistics; 4 months' seed grain.
Helmer, A.	Calgary, Alta.	1,809	3	5,796	11,592	1,927 35		2 months' seed grain.
Robertson, S. N.	"							Appointed March 25, 1909.
Jonasson, P.	Winnipeg, Man.	192	84	2,595	1,848	1,147 80	192 20	3 months' seed grain.
Kennedy, F.	Whitewood, Sask.	208	301	4,389	3,526	376 85	40 00	2 months' seed grain.
Lagimodiere, Wm.	Winnipeg, Man.	287	65	3,362	1,621	1,228 50	238 50	Resigned September 30, 1908.
Liesner, J. E.	Drumhury, Alta.							Appointed January 22, 1909.
Link, Adam	Lethbridge, Alta.	629	310	4,213	1,159	1,127 90	212 85	1 month's seed grain; appointed to Land Office.
Magee, W. D.	Lantern, Alta.	305	173	5,205	1,903	850 80	30 50	
Moffat, Jas.	Marcelin, Sask.	159	291	3,220	2,321	637 02	29 25	
MacDonald, G.	Belvedere, Alta.	111	11	1,133		200 35	13 00	
McCallum, N. G.	Yorkton, Sask.				388	21 45		

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McCarthy, D. J.	116	212	3,411	2,865	1,066 65	151 40	2 months' seed grain.
McDiarmid, D. J.	17	27	435	332 45	18 55	2½ months' seed grain, ill 7 months.
McGregor, R. E.	74	110	2,502	1,511	685 08	53 30	2 months' seed grain.
McLeod, A.	380	224	4,550	2,185	864 36	182 90	2 months' seed grain.
McLeod, D.	434	171	4,830	2,359	776 83	65 55	11 months' work.
McNab, D. C.	2	.....	11	886	26 75	.....	3 months; resigned July 1, 1908.
Nichol, W. F.	245	255	3,007	4,653	1,036 38	39 35	2 months' seed grain.
O'Connor, L.	30	12	557	485	4 56 73	304 00	Appointed January 15, 1909.
Oliver, Ed.	222	106	3,069	2,205	972 53	107 00	2 months' seed grain.
Pentland, R. P.	159	147	2,955	1,197	701 72	22 10	"
Robertson, E.	23	6	433	184	59 95	.....	Appointed February 13, 1909.
Seale, John	9	11	330	1,305	189 75	.....	23 days' seed grain.
Shandro, Andrew	3	16	585	244	222 50	.....	Appointed January 30, 1909.
Shene, Alex.	252	620	5,126	2,171	681 92	42 75	1 month's seed grain.
Stauffer, J. E.	359	280	3,188	4,520	811 85	60 35	Resigned March 4, 1909.
Sutton, C.	768	592	5,469	1,089	1,031 90	83 10	2 months, 11 days' seed grain.
Volmer, F. J.	156	200	2,065	1,755	643 55	21 50	2 months' seed grain.
Williamson, C. R.	281	266	3,135	979	773 85	24 50	"
White, M.	50	16	1,635	1,138	562 05	12 00	Began May 4, 1908, 4 months' work.
	12,184	6,754	130,471	111,128	33,562 31	2,553 72	
Compared with 1908.	15,476	6,281	150,553	111,378	36,641 51	4,770 04	
" 1907.	39,679	4,338	118,828	71,560	26,910 79	1,620 15	

R. E. A. LEECH,
Inspector of Dominion Lands Agencies.

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No. 4.

REPORT OF THE AGENT AT BATTLEFORD.

DOMINION LANDS OFFICE,

BATTLEFORD, SASKATCHEWAN, April 3, 1909.

The Commissioner of Dominion Lands.
Ottawa.

SIR,—I have the honour to submit the annual report of this office for the year ending March 31, 1909.

Conditions during the past year have on the whole been favourable; the crops were good throughout this district, excepting oats and potatoes, which were under the average.

The weather during the months of January and February last was very cold, but milder than usual during March, and there is every indication of a very favourable spring. The snowfall was normal.

The southern part of this district is now served by two lines of railway, as indicated in my last year's report. Several branch lines are projected, and it is given out that the Grand Trunk Pacific Railway will build this year from Biggar, on their main line to this point, making connection here with the Canadian Northern Railway system. The two lines referred to in the south have been operated since last fall and have been the means of preventing any further trouble caused by the scarcity of fuel in that region. Many new towns have sprung up along these lines, where settlers find a market for their produce within easy reach. Grain elevators are already dotting the prairie and several thousand bushels of grain were shipped to eastern markets during the past fall and winter.

The new regulations coming into force on the 1st September last permitting entries for pre-emptions and purchased homesteads were taken advantage of by a large number of settlers. For several days the services of the police were required to handle and control the huge crowd awaiting admission. The heavy work it occasioned was done without any addition to the staff. Many hours of overtime were put in, and this was done with such good will and so much interest brought to the proper performance of the extra work that special mention must be made of it.

Settlement is now reaching out in every direction, and the opening of a sub-agency in one of the new towns in the south would be a great convenience to settlers coming over the Canadian Pacific and Grand Trunk Pacific Railways. A proper idea may be formed as to how rapidly settlement has been increasing from the fact that three years ago only about fifteen post offices could be found in this district, while at the present moment over one hundred and forty are in operation.

Following is a statement of the work performed during the year :—

Free homestead entries.....	3,371
Purchased homesteads.. . . .	138
Pre-emptions.....	863
Entries cancelled.....	1,755
Land scrip located (acres).....	3,840
Volunteer bounty land grants located (acres)....	4,478
Timber permits issued.....	356
Hay permits issued.....	209
Grazing leases.....	31

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Applications for patent recommended.. . . .	1,806
Letters received.... .	34,641
Letters written.... .	31,199
Total revenue.... .	\$82,351 62

I have the honour to be, Sir,

Your obedient servant,

L. P. O. NOEL,

Agent of Dominion Lands.

No. 5.

REPORT OF THE AGENT AT BRANDON.

DEPARTMENT OF THE INTERIOR,
DOMINION LANDS OFFICE,

BRANDON, MANITOBA, April 1, 1909.

The Commissioner of Dominion Lands,
Ottawa.

SIR,—In submitting the annual report for the year ending March 31 last, I beg to say there has been an increase in the several branches of work in this office, owing chiefly to the opening for homesteading of the odd numbered sections not appropriated by the Canadian Pacific Railway Company and a portion of the Spruce Wood reservation, which is shown by the summary of work performed.

The lands thus opened have been secured chiefly by settlers in the vicinity, all being anxious to increase their holdings. These lands are mainly suitable for pasturage and as the farmers have learned the advantages of mixed farming they were secured at once.

The cancellations have increased slightly, land being scarce in this agency. Those wishing to farm keep themselves advised of the standing of the homesteaders, and, where an entry is found in default, promptly apply for an inspection.

The prospects for the coming crop are excellent. There is more than the usual amount of moisture in the ground, owing to the many snowstorms which continued into the spring and not having the high drying winds. The farmers are all busy getting ready to get the crop in and a larger area is being sown yearly. The price of land is steadily increasing and the demand is fair; many farms have already changed hands at a high figure.

Immigration has commenced and from all parts people are pouring into the country; many going further west seeking homesteads, others remaining in the towns, procuring work at their various trades, work of all kinds being plentiful. The people each year are of a better class, many coming from England and the United States and bringing capital enough to settle themselves on their homesteads, others buying improved farms outside the towns.

The following is a statement of the work performed for the past twelve months, ending 31st ultimo :—

Homestead entries granted.... .	170
Timber permits.. . . .	370
Entries cancelled.. . . .	53
Applications for patent.... .	324
Letters received.... .	9,304
Letters written.. . . .	8,113

I am, Sir,

Your obedient servant,

L. J. CLEMENT,

Agent of Dominion Lands.

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No. 6.

REPORT OF THE AGENT AT CALGARY.

DEPARTMENT OF THE INTERIOR,
DOMINION LANDS OFFICE,
CALGARY, ALBERTA, May 12, 1909.

The Commissioner of Dominion Lands,
Ottawa.

SIR,—I have the honour to submit my report of the work performed in this office during the twelve months ended March 31, 1909.

The number of homestead entries, 2,710, is an increase over the previous year of 1,430; in addition to which there were 115 purchased homesteads and 1,825 pre-emption grants.

The revenue from lands amounts to \$100,163.42, exclusive of the amount paid at head office on account of sales of lands, grazing leases, &c., being an increase of \$62,953.20 over the revenue of the previous year.

As the business for the timber and mines and school lands branches for this district is also conducted at this office, I may mention that the revenue from these sources amounted to \$32,661.64, being a decrease of \$2,738.57 from the previous twelve months.

The prospects for a good crop this year are excellent, although it has been reported that the fall wheat has been damaged to a certain extent in some localities, but just how far this will prove true remains to be seen, as sometimes it is impossible to say at this particular season whether fall wheat has been damaged to any extent or not.

The winter was not a severe one, so far as bad storms were concerned; the thermometer registered around forty below zero for a short time, but little or no damage was done to stock on the ranges.

The price of beef has been considerably higher this spring than last.

Horses of all kinds never commanded a better price, heavy work horses being greatly in demand.

The settlers throughout this part of the country appear to be very contented, and hopeful, and with another crop this year, such as the one we had last the price of land will likely reach a higher figure, and there will be a greater rush for southern Alberta than ever before, although at the present time a great many people are coming into the country. For instance, entries covering about 1,250 quarter-sections were granted during the month of April this year, being an increase over the entries granted during the corresponding month of the previous year of about one thousand.

The city of Calgary continues to forge ahead very rapidly, the population now being in the neighbourhood of twenty-eight thousand, and the prospects for a very busy season never were better.

The detailed statement of receipts on account of Dominion lands was forwarded to head office on April 1, the day after the fiscal year expired.

I have the honour to be, Sir,

Your obedient servant,

J. R. SUTHERLAND,
Agent of Dominion Lands.

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No. 7.

REPORT OF THE AGENT AT DAUPHIN.

DEPARTMENT OF THE INTERIOR,
DOMINION LANDS OFFICE,
DAUPHIN, MANITOBA, March 31, 1909.

The Commissioner of Dominion Lands,
Ottawa.

SIR,—I have the honour to submit my report on the business of the Dauphin Lands Office and District, for the year ending this day.

The year has shown a very marked increase in the number of homestead entries, over any former year during my tenure of office here, this being due principally to the opening of all hitherto undisposed of odd numbered sections on September 1 last. This caused a strenuous rush on the office for some time, and during the first few days it was found necessary to call in the assistance of the homestead inspectors, with some of the forest rangers, to control the great crowd, and keep order. The staff was equal to the occasion and handled the rush of work with despatch, though handicapped on account of the confined office space, and the fact that at the time alterations were being made in the building. A very large number of entries were passed, with little or no friction and but very few applicants went away dissatisfied, these few on account of not being able to secure such lands as they sought for. On the first day the crowd was so great that the stairs leading to the office broke down under the press. Fortunately, only one man was at all hurt, he only slightly, and he being admitted to the office through any private door, with the consent of those waiting in line, secured his entry.

The general work of the office has increased very rapidly, correspondence especially, this largely on account of the timber business, and owing to the fact that so many requisitions for timber permits are prepared by justices of the peace and commissioners who are not qualified to attempt such work, and who prepare the papers in an improper manner, and do not evidently question the applicants as to what timber they may already have had, what timber is on their own lands, or whether they have old permits still unreturned. It has been reported to me that in at least one case, these oversights are not unintentional, as a fee is charged each applicant for each and several affidavit taken by these officers. If it were possible, I would suggest, especially now that the quantities of available timber are becoming restricted, that all such requisitions might be taken only by some duly qualified officer of the department.

Some very heavy cuts of timber have been reported during the past winter, from the larger mill operators, and I expect that when the portable mill books are returned, it will be found that they also have taken out large quantities, the winter having been most favourable for this class of work, and with the exception of a very cold period during December, we had no severe weather. There was sufficient snow to facilitate work, though not too much, and judging from the number of permits issued, all classes of people took full advantage of the favourable conditions.

I would strongly recommend more careful supervision of the working of the portable mills, the owners of which, having no vested interests look only at the immediate profits to be derived, and slash timber without any attempt to economize. This work should, I believe, be kept strictly under the supervision of competent officers of the department, who should be detailed to watch the operations of as many mills as they could safely give attention to, and the tract where cutting is to be done, especially in the reserves, should be distinctly specified, only mature trees taken, and all tops, debris, &c., either piled or taken out of the bush to prevent fires running.

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I consider that it is quite impossible for the staff of rangers at present engaged, to keep sufficient watch on these numerous mills, and visit them as often as required in order to check their illegal cutting.

The cordwood business has been prosecuted to a considerable extent, and the Winnipeg market, as that of other larger places, looks for the northern tamarack, paying higher prices than for the product of other parts. Many cases of illegal cutting have been found and the trespassers made to pay the double dues, but in my opinion this penalty, 50 cents per cord, is not sufficient to deter some of the more irresponsible dealers who, if they can manage to get a few cars without dues, can well afford to pay when caught. I would advocate the confiscation of wood where found in possession of any dealer who had at any time previously been found with wood cut illegally and the sale of the wood irrespective of his claims. I think a very few examples along these lines would have a most deterring effect. A frequent, if not constant patrol of the lines of rail, where traversing timbered land should be carried out, as I find that immediately one of our officers leaves a certain section, the parties engaged at once repeat their offences, in the hope that they may dispose of their wood before the next visit.

The penalty of double dues on lumber is in my opinion no deterrent whatever, as parties wanting lumber can well afford to pay this, and still secure cheaper material than they can obtain through the legitimate dealers; and I find the same parties figuring in seizures time after time, this more especially from lands in the reserves.

Locally the crops were not up to the average, but to compensate for this, many sections of the district were especially well favoured, so that on the whole I am pleased to be able to report a favourable year for the entire district. Prices were high, and all grains for sale were marketed in good condition, so that perhaps quite as much was realized from the crops as in former years.

The last two seasons, when crops had been somewhat below the average, have caused the farmers to pay more attention to mixed farming and stock-raising, which will no doubt result in their advantage in the near future. There is still ample scope for further advancement along these lines, and the establishment of several creameries throughout the district will furnish a ready market for dairy products.

More attention could well be paid to hogs and poultry, as the supply has never as yet met the local demand, and during winter it is almost impossible to purchase fresh eggs, which command fancy prices. This could be remedied with but little trouble, and would yield the poultry man a splendid return on his outlay.

A number of pure bred animals for stud purposes have been imported, the result being easily seen in the improved herds found through the country, and this good line of work is still going on.

The usual amount of improvement in municipal matters is noticed, roads, bridges and ditches being built wherever called for, and though taxes are somewhat high in certain municipalities, the people feel the money is well spent, and the improvements are of a permanent character.

Schools and churches are springing up in all settlements when required, and general business, though perhaps not quite as brisk as in former years, has still been of a very satisfactory nature, but few failures being reported.

I feel that I cannot omit mentioning our various hospitals, which have, as usual, done noble work. Though no epidemics have visited us, still these institutions have been very busy, large numbers of accident cases coming to them from the numerous lumber camps as well as from the railways.

I attach a memo. of the principal lines of business carried through the office.

Your obedient servant,

F. K. HERCHMER.

Agent of Dominion Lands.

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	No.	
Homestead entries granted.	1,729	\$ 17,120 00
Interchanges.	2	15 00
Improvements collected.	79	1,923 50
Land sales (cash).	32	4,164 03
Land sales (scrip).	1	80 00
Sundries, searches, &c.	383	193 45
Total from lands.		\$ 23,414 98
Timber permits issued.	1,432	6,616 21
Timber seizures.	93	2,928 73
Hay permits.	90	461 25
Grazing leases.	1	186 52
Mining locations.	1	5 00
Total from timber and mines.		\$ 10,197 71
School land sales (cash).	2	505 22
Seed grain collections.	10	156 10
Total miscellaneous.		661 32
Grand total revenue.		\$ 34,301 01
Letters received.	21,447	
Letters written.	12,056	
Applications for patent taken.	386	
Entries cancelled.	329	

No. 8.

REPORT OF THE AGENT AT EDMONTON.

DEPARTMENT OF THE INTERIOR,

DOMINION LANDS OFFICE,

EDMONTON, ALBERTA, April 17, 1909.

The Commissioner of Dominion Lands,
Ottawa.

SIR,—I have the honour to submit the annual report of this office for the year ending March 31, 1909.

The financial year just closed opened under the somewhat unfavourable conditions brought about by the financial stringency which set in during the year 1907, and the partial failure of the crops during that season. The financial stringency continues, though somewhat modified, and another crop has been harvested which has netted the farmer a satisfactory return. Some damage was done to the crops by frost, wheat having suffered more particularly, but any loss sustained in this way was at least partially offset by the unusually high price paid for the products of the farm. The winter was an average one, with abundance of snow, and though the temperature registered unusually low, was free from severe storms. It would be quite safe to state that the condition of the settlers is fairly satisfactory.

There is a slight increase in the revenue of this office over that of last year, being \$87,532.46 as against \$76,473.35 for the preceding year. The portion of this accruing from the disposal of Dominion lands is \$62,011.55 as against \$48,400.18 for the preceding year, and the fact that homestead entry fees amounted to \$49,167, or about 80 per cent of the whole, shows that there is little activity along other lines, which was doubtless due to the scarcity of money.

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While it is noted with satisfaction that there has been an increase of about 30 per cent in the number of entries, it is only fair to state that the showing of this agency in this respect has suffered from the fact that almost none of the pre-emption area lay within its boundaries. The throwing open of odd numbered sections for settlement gave very general satisfaction, and created for a time a very marked activity in homesteading. These, together with some sixty townships that have been thrown open for settlement during the past year, would appear to have been sufficient to meet all reasonable demands.

Compared with the preceding year, the increase in the volume of correspondence is very marked, and the fact that a large percentage of it deals with inquiries of various kinds, is in itself a promise, if not an assurance, of great activity in the settlement of this district during the next fiscal year. The area of open prairie land now available within the district has become comparatively small, and one result is that many are directing their attention toward the Peace River district where it is understood there are larger stretches of open land. Judging from the correspondence, the increased attention being given by the department to this remoter Northwest will be much appreciated.

The following comparative figures will serve to indicate the progress of the district :—

1906-1907 (nine months).		1907-1908		1908-1909.	
Entries.	Revenue.	Entries.	Revenue.	Entries.	Revenue.
2,766	\$2,325 72	4,051	\$76,473 35	5,242	\$87,532 46

SUMMARY OF WORK, 1908-1909.

Letters received.	56,007
Letters sent out.	46,229
Applications for patent.	2,070
Homestead entries cancelled.	2,137
Hay permits issued.	262
Timber permits issued.	1,853
Homestead entries granted.	5,242
South African veteran scrips located.	29
Half-breed scrips located.	25
Revenue.	\$87,532 46

Your obedient servant,

K. W. MACKENZIE,

Agent of Dominion Lands.

No. 9.

REPORT OF THE AGENT AT ESTEVAN.

DEPARTMENT OF THE INTERIOR,
DOMINION LANDS OFFICE,

ESTEVAN, SASKATCHEWAN, April 15, 1909.

The Commissioner of Dominion Lands,
Ottawa.

SIR,—I have the honour to submit the annual report of this office for the year ending March 31, 1909.

The past year has, on the whole, been very favourable; the yield of wheat, while not so heavy as in some previous years, was satisfactory and the high prices obtained made the crop a profitable one. The past winter has been unusually mild, and stock have come through in excellent condition. Seeding is general at this date, and it is

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expected that the area brought under cultivation will be about 25 per cent greater than last year. On the 1st September last the odd numbered sections in thirty-one townships in this district were thrown open to the settlers under the new Dominion Lands Act. On the opening of the office on that day a crowd of between 400 and 500 people were in line outside the building and were admitted by ticket; a large number of these people were homesteaders within the pre-emption area and were anxious to secure an adjoining quarter-section for a pre-emption. Land available for pre-emption entry, and contiguous to lands entered for as homesteads, were reserved for fifteen days so that the actual settlers had ample time to secure a pre-emption. The rush of applicants kept up until after the 19th, and during this time the staff worked cheerfully till a late hour each night.

Appended is a statement of work performed during the fiscal year.

Letters received....	13,887
Letters written....	12,125
Applications for patent....	1,028
Entries cancelled....	342
Homestead entries....	840
Pre-emption entries....	911
Purchased homestead entries....	57
Land sales....	89
Payments for improvements (2,282.90)....	45
Payments on account of sundries (\$96.95)....	265
Timber permits....	324
Grazing rentals....	34
Hay permits....	283
Mining fees and rentals....	7
Coal lands (application fees)....	18
Coal lands (sales)....	3
Coal lands (royalty)....	11
Total revenue collected....	\$35,147 85

I have the honour to be, Sir,

Your obedient servant,

R. CLAUD KISBEY,
Agent of Dominion Lands.

No. 10.

REPORT OF THE AGENT AT HUMBOLDT.

DEPARTMENT OF THE INTERIOR,
DOMINION LANDS OFFICE,

HUMBOLDT, SASKATCHEWAN, April 6, 1909.

J. W. GREENWAY, Esq.,
Commissioner of Dominion Lands,
Ottawa.

SIR,—I have the honour to submit the annual report of this office for the year ending March 31, 1909.

I regret to say that to the farmer the past year was an unfavourable one, the crops being much below the average. This has necessitated a large number of them raising loans on their farms, where they have procured their patents, at rates of interest none less than 8 per cent and as high as 10 and 12 per cent.

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As the farmers' success or otherwise in this country reflects on the whole commercial and industrial situation it would be well if some means could be devised whereby the man developing the resources of the country could procure the funds required for his work at more reasonable rates of interest and the question of the means to this end is one that might well engage the attention of the federal and provincial governments.

Notwithstanding the fact that a lean year has just passed, farmers and merchants, and in fact all business men appear to be singularly optimistic. Confidence is being restored in all lines of business from the financial institutions down, and this generally optimistic spirit is bound to have a great effect in again bringing about those conditions of prosperity that existed up to 1907. The reaction after the period of financial depression has, up to the present time been very gradual, but I look from now on for a greatly accelerated movement in the direction of better times.

The outstanding feature of the year's work was the bringing into force of the Dominion Lands Act of 1908. The opening of the undisposed of odd numbered sections to homestead entry made in this district about double the quantity of land available for entry at the time the Act became operative. The effects in this particular will be far-reaching in the solidifying of settlements, the easing of the burdens of taxation and the greater opportunity through increased settlement for educational development.

The pre-emption and purchased homestead provisions of the Act apply to only one range in this agency, and while it affects only that small portion of the district sixty-one pre-emptions and sixteen purchased homestead entries have been granted.

The purchased homestead privilege has permitted a number of very desirable settlers to acquire land at a very reasonable figure, and has been an undoubted boon to many settlers who have been able to take advantage of its provisions.

Appended is a statement of the transactions of this office for the year just ended.

Your obedient servant,

A. NORQUAY,

Agent of Dominion Lands.

Homestead entries.....	2,421	
Pre-emption entries.....	61	
Land sales.....	27	
South African Veteran scrip.....	81	
Half-breeds scrip.....	1	
Purchased homesteads.....	16	
Patent Branch revenue.....		\$ 33,858 00
		<hr/>
		\$ 33,858 00
Timber permits.....	418	
Hay permits.....	60	
Timber and Mines Branch revenue.....		293 20
School lands sundries.....	150	
Provision collections.....	1	
Seed grain collections.....	3	
Miscellaneous revenue.....		901 69
		<hr/>
Total.....		\$ 35,053 89
Letters received.....	30,880	
Letters sent.....	31,081	
Applications for patent.....	2,618	
Entries cancelled.....	1,126	

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No. 11.

REPORT OF THE AGENT AT KAMLOOPS.

DEPARTMENT OF THE INTERIOR,

DOMINION LANDS OFFICE,

KAMLOOPS, B.C., April 7, 1909.

The Commissioner of Dominion Lands,
Ottawa.

SIR,—I have the honour to submit my annual report for this office for the year ending March 31, 1909.

The harvest of 1908 was above the average, and the weather being favourable, was well harvested.

The market for grain, roots, hay and stock was good and prices high. Stock of all kinds went into winter quarters in good condition, and the winter season being favourable have come through in good shape without loss, and stockmen report a surplus of hay on hand.

The work of the office shows a decided increase, with the exception of land sales. This is accounted for by all the land in the railway belt being withdrawn from sale. Homestead entries have more than doubled any previous year. The department is contemplating sales in the dry belt under strict conditions as to irrigation; this, in my opinion, is the only manner in which the dry belt can be made productive.

The laws governing the disposal and distribution of water for irrigation were repealed at the last session of the provincial legislature, and many hope that some of the disabilities under which they have suffered in the past have been removed, but as the Act is not yet in force it remains to be seen how beneficial the new Act will prove.

Some small areas which have been logged over have been withdrawn from timber berths and the lands dealt with according to the regulations. I understand that an inspector of timber berths has been appointed by the department with a view to having the lands which have been denuded of timber, and which are suitable for agriculture, withdrawn from the berths and made available for settlement. This action is highly commendable, and if thoroughly carried out will be the means of clearing up a large number of applications in this office.

The district is particularly prosperous, spring has opened up favourably, and with the anticipation of the resumption of mining there is every evidence of continued prosperity.

The following is a summary of the work performed in this office during the fiscal year :—

Letters received.....	4,400
Letters written.....	4,400
Homestead entries granted.....	400
Homestead entries cancelled.....	70
General sales.....	50
Townsite sales.....	5
Hay permits.....	9
Applications for patent.....	83
Grazing rents.....	302
Registrations.....	17
Total revenue collected.....	\$ 19,766 27

Your obedient servant,

A. B. CURRIE.

Agent of Dominion Lands.

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No. 12.

REPORT OF THE AGENT AT LETHBRIDGE.

DEPARTMENT OF THE INTERIOR,

DOMINION LANDS OFFICE,

LETHBRIDGE, ALBERTA, April 13, 1909.

J. W. GREENWAY, Esq.,

Commissioner of Dominion Lands,

Ottawa.

SIR,—I have the honour to submit for your consideration this office's annual report for the year ending March 31, 1909.

I have much pleasure in stating that the rush of settlers to this district still continues and the numbers far exceed those of any previous year. These settlers come from all parts of the world, but more particularly might I mention those coming from the United States as well as eastern Canada.

Settlement is reaching out in every direction and in order to provide suitable locations for incoming settlers it will be necessary to have surveys in this district proceeded with immediately.

The homestead entries for the Lethbridge agency far outnumber those of any previous year. The work of the office has almost doubled in every branch but has been disposed of satisfactorily.

The sub-agents and homestead inspectors have been very busy and deserve credit for the manner in which they have performed their departmental duties. The staff has worked faithfully and is deserving of special mention.

The following is a partial list of the work performed during the past year :—

Letters received.....	31,574
Letters written.....	24,962
Applications for patent received.....	1,201
Homestead entries granted.....	3,820
Pre-emption entries granted.....	2,656
Purchased homesteads granted.....	71
General sales.....	209
Entries cancelled.....	1,290
Hay permits issued.....	124
Timber permits.....	402
Timber seizures.....	6
Grazing rents.....	249

The total revenue collected for the fiscal year of 1908-9 is \$148,560.52.

Your obedient servant,

J. W. STAFFORD,

Agent of Dominion Lands.

No. 13.

REPORT OF THE AGENT AT MOOSEJAW.

DEPARTMENT OF THE INTERIOR,

DOMINION LANDS OFFICE,

MOOSEJAW, SASKATCHEWAN, May 4, 1909.

J. W. GREENWAY, Esq.,

Commissioner of Dominion Lands,

Ottawa.

SIR,—I have the honour to submit the annual report of this office for the fiscal year ending March 31, 1909.

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It is with much satisfaction that I am able to allude to the foregoing year as the most successful ever experienced in the settlement of the west from the viewpoint of the number of homestead entries granted, and in this respect the Moosejaw district has been favoured as the centre of unusual attraction to land-seekers.

The greatest stampede for land commenced on September 1 last when the new Dominion Lands Bill came into force, and since that time the opening from time to time of a large number of newly surveyed townships has resulted in some particularly noted rushes for land.

There is still a large unsettled area of good land in different parts of this district, and although these parts, in some cases, are a considerable distance from existing railroads, settlement is going on at a rapid rate.

From present indications the current year will be a most prosperous one. Seeding operations are well advanced at this point and conditions generally are very promising.

Appended is a statement of work performed during the fiscal year.

Your obedient servant,

J. RUTHERFORD,

Agent of Dominion Lands.

Patent Branch—	Number.	Revenue.
Homestead entries.....	8,720	\$ 86,970 00
Pre-emption entries.. . . .	7,229	71,680 00
Purchased homestead entries.. . . .	249	2,480 00
Improvements.. . . .	194	9,181 35
Land sales (cash).. . . .	293	50,901 45
Land sales (scrip).. . . .	45	6,794 25
Land scrip (32,942 acres).. . . .	110	
Sundries.. . . .	443	272 70
		<hr/>
		\$228,279 75
		<hr/>
Timber and Mines Branch—		
Royalty on sales.....	1	\$ 4 00
Timber permits.. . . .	756	205 47
Hay permits.. . . .	429	1,322 25
Grazing rents.. . . .	69	2,363 19
Mining fees.. . . .	2	10 00
Coal lands fees, &c.. . . .	4	14 56
Sundries.. . . .	2	3 50
		<hr/>
		\$ 3,922 97
		<hr/>
Miscellaneous—		
School lands sundries.....	141	\$ 912 79
Seed grain collections.. . . .	13	620 16
		<hr/>
		\$ 1,532 95
		<hr/>
Total revenue.. . . .		<hr/>
		\$233,735 67
		<hr/>
Letters received.. . . .	60,766	
Letters written.. . . .	77,000	
Applications for patent received.. . . .	1,988	
Entries cancelled.. . . .	2,988	

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No. 14.

REPORT OF THE AGENT AT NEW WESTMINSTER.

DEPARTMENT OF THE INTERIOR,

DOMINION LANDS OFFICE,

NEW WESTMINSTER, B.C., April 6, 1909.

The Commissioner of Dominion Lands,
Ottawa.

SIR,—In accordance with the departmental instructions I have the honour to submit my report for the fiscal year ended March 31, 1909.

There has been a constantly increasing number of people coming to the Pacific coast from the eastern provinces, but the great majority of those who desire lands for homes are purchasing small parcels from the subdivided areas in the New Westminster district, because the remaining Dominion lands are usually in isolated places without roads.

As was the case last year, nearly all to whom formal homestead entries were granted have been residing on their locations many months before surveys reached them. The time of residence is counted when they make their applications for patent, and thus I find that these people exercise great diligence to make a good showing in their period of residence. I may also state that a large number of people pass through this district over the Canadian Pacific Railway on their way from the Pacific states of Washington, Oregon and California to Alberta and Saskatchewan. Many of these arrive in Vancouver city without settler's certificates, and when they come to Canadian Pacific offices for the reduced rate it is necessary that they come to me at New Westminster for the requisite completion of forms of declaration, &c., under which letters of recommendation are issued by me.

This service has gone on for years, but this year has surpassed others in the number of such applications.

Much of my time is consumed in immediate attention to these cases, because delay would mean more expense to them.

I have been hoping for years that the pressure on my time might be relaxing with the settlement of the great bulk of the land matters of the district, but I find that with the increase of population round about there are constantly arising new and perplexing questions and greater intensity in obtaining ready solutions.

Great relief has come to many people by circumstances which caused the removal of mortgages that weighed down the best energies. It is to be hoped that these deadly incumbrances on small and unproductive bush places will pass away in the main.

With the constantly rapid growth of the city of Vancouver and the stimulus given to this city of New Westminster, and the many smaller towns and villages along the lower Fraser valley, it is not too much to hope that nearly all the agricultural lands, or such as are capable of being tilled in the valley will be developed to supply the markets. At the present time there is much encouragement along these lines as the prices of all productions are acknowledged to be very satisfactory.

I extract the following from the monthly summaries furnished the inspector of agencies and the head office :—

Letters received (increase of over 400).....	2,923
Letters sent (increase of nearly 500).....	2,614
Applications for patent recommended.....	30
Homestead entries.....	32
Total receipts (besides some payments at head office)...	\$2,863 85

The receipts include nine payments of \$5 each on applications for coal mining leases.

Your obedient servant,

JOHN MCKENZIE,

Agent of Dominion Lands.

No. 15.

REPORT OF THE AGENT AT PRINCE ALBERT.

DEPARTMENT OF THE INTERIOR,

DOMINION LANDS OFFICE,

PRINCE ALBERT, SASKATCHEWAN, April 10, 1909.

J. W. GREENWAY, Esq.,

Commissioner of Dominion Lands,

Ottawa.

SIR,—I have the honour to submit for your consideration the annual report of this office for the fiscal year ending March 31, 1909.

The attached statement, marked Schedule 'A,' gives a summary of the work performed and of the revenue collected during the year, also that for the previous year, and shows in detail the increase or decrease as compared with the year ending March 31, 1908.

From this schedule you will see that the revenue collected for the year just closed is \$75,651.57 as compared with \$53,663.22 for the previous year, being an increase of \$21,988.35.

The number of homestead entries granted during the year was 2,079. There were also 57 pre-emption entries and 52 purchased homesteads, making a total of 2,180, being an increase of 562 over the previous year.

There is a large area of surveyed land still available for settlement in this district, the majority of which is excellently adapted for mixed farming, there being abundance of good water and excellent timber for shelter and fuel, and as the past two seasons have shown the profit to be derived from, and the safeness of the investment in this class of farming I anticipate an even greater influx of settlers during the present year than was experienced during that just closed.

Attached hereto is a statement marked Schedule 'B,' showing the revenue collected in connection with the School Lands Branch, from which you will see that the revenue from this source has also increased.

The work and revenue connected with the Timber Branch show a decided increase over the previous year as does also that of the Mines Branch; these will, however, be dealt with under separate reports.

In conclusion I would say that notwithstanding the large and general increase both of work and revenue experienced in this district during the year just closed I anticipate an even greater increase during the present year, this anticipation not being mere conjecture, but borne out by the large number of letters of inquiry received from intending settlers and investors, not only from different parts of Canada and the United States, but from Great Britain and many of her colonies, from continental Europe, Africa and South America, which would appear to show that the large district north of Prince Albert is practically just commencing to be opened up and the immense and varied resources just beginning to be developed.

Your obedient servant,

GEO. L. DEMPSTER,

Agent of Dominion Lands.

SCHEDULE A.

STATEMENT of the business transacted at the Prince Albert Dominion Lands and Timber Agency for the Year ending March 31, 1909, and comparative statements showing previous year's business and increase or decrease therefrom.

	WORK AND RECEIPTS FOR YEAR ENDING MARCH 31, 1909.			CORRESPONDING PERIOD FOR PREVIOUS YEAR.			INCREASE OVER PREVIOUS YEAR.			DECREASE FROM PREVIOUS YEAR.		
	No.	Amount.	\$ cts.	Totals.	\$ cts.	No.	Amount.	\$ cts.	Totals.	No.	Amount.	\$ cts.
<i>Patent Branch.</i>												
Homesteads.....	2,079	20,165 00		1,626	16,000 00	403	4,165 00					
Pre-emptions.....	57	7,570 00		Nil.		57	7,570 00					
Purchased homesteads.....	52	7,338 59		"		52	7,338 59					
Improvements.....	87	2,841 17		178	5,120 87					91	2,279 70	
Land sales—Cash.....	26	3,469 73		29	2,066 53					3	159 58	
" Serp.....	6	880 00		4	1,039 58	2						
Town site sales.....	Nil.			Nil.		180	47 66					
Sundries.....	230	62 01		50	14 35							
Dominion Lands, total.....									11,045 17			
<i>Timber and Mines Branch.</i>												
Bonus.....	Nil.			Nil.		10					1,135 45	
Ground rent.....	38	4,793 05		28	5,928 50							
Royalty on sales.....	38	27,456 22		32	16,251 93	6	11,204 29				1,563 35	
Timber permits.....	1,357	3,431 20		1,074	5,494 55	283						
Timber seizures.....	56	1,621 06		33	5,445 81	23	1,175 25					
Hay permits.....	176	428 25		70	299 75	106	218 50					
Grazing rents.....	Nil.			1	3 20					1	3 20	
Mining fees.....	115	847 50		3	15 00	112	832 50			3	15 00	
Coal lands fees, &c.....	Nil.			3	15 00							
Stone quarries.....	"			Nil.								
Sundries.....	"			"								
Timber dues, &c., total.....									28,363 74		10,713 54	
<i>Miscellaneous.</i>												
School lands sales.....	Nil.	857 85		Nil.	679 02						178 83	
" sundries.....												

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Seed grain collections	429 94	1,287 79	379 13	1,038 15	50 81	229 64	21,988 35
Miscellaneous, total		75,651 57		53,663 22			
Grand total							
Letters received	15,442		13,379		2,663		
Letters written	13,081		9,968		3,113		
Applications for patent received	863		848		15		
Entries cancelled	755		667		88		

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SCHEDULE B.

SCHEDULE showing Revenue from School Lands collected during the Fiscal Year ending March 31, 1909.

Month.	Grazing and Rental.	Hay Permits.	Timber Permits.	Cultivation Permits.	Grand total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
April, 1908	25 50	96 10	.....	.....	121 60
May	38 64	29 50	.....	.....	68 14
June	12 80	41 60	1 25	.....	55 65
July	70 40	200 30	.....	.....	270 70
August	44 80	25 20	.....	.....	70 00
September	27 81	2 70	.....	.....	30 51
October	32 00	.....	7 75	.....	39 75
November	32 00	.....	6 25	.....	38 25
December	38 40	20	1 50	.....	40 10
January, 1909	6 40	30	.....	.....	6 70
February	25 60	1 00	.....	10 00	36 60
March	57 60	.....	22 25	.....	79 85
Totals	411 95	396 90	39 00	10 00	857 85

No. 16.

REPORT OF THE AGENT AT RED DEER.

DEPARTMENT OF THE INTERIOR,

DOMINION LANDS OFFICE,

RED DEER, ALBERTA, April 13, 1909.

J. W. GREENWAY, Esq.,

Commissioner of Dominion Lands,

Ottawa.

SIR,—In submitting my annual report for the fiscal year ending March 31 it is gratifying to be able to advise you of the great progress made in the Red Deer district. A bountiful harvest, with good prices for all farm products, following the unfavourable summer of 1907, and the general depression owing to the financial stringency, put new life into the settlers. The foresight of the government in rendering assistance to the settlers by supplying them with seed grain came as a welcome relief to many, especially of the newer and poorer class, who, through the unfavourable season before mentioned, were not in a position to import seed grain, and had it not been for this wise action on the part of the government hundreds of acres of land which were broken and prepared for the seed would have been allowed to lie idle, thousands of bushels of grain, consequently a very large sum of money, would have been lost to the country, which would have received a set-back from which it would take a long time to recover. The seed furnished proved to be of excellent quality and great credit is due to all who took part in selecting the grain and in its distribution, which was carried out in a very satisfactory manner. The spring of 1908 was a most propitious one for seeding operations, and was followed by a fine summer, and delightful harvest weather; as a consequence excellent crops of all cereals were garnered, for which good prices were realized, and if the elements are as propitious the coming season, a year of increased prosperity is undoubtedly in store for this district and the province at large. This year will undoubtedly be one of great railway development, and the provincial government are to be commended for their railway policy. The branch line from Lacombe to Stettler will be extended to Castor, on Beaver Dam

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creek, a distance of some 45 miles, and will be completed in time to handle this year's crop. This extension will serve one of the most productive grain sections of this district, if not of the province, and will encourage the settlers in the eastern portion of the district to put larger areas of land in crop.

The telephone policy of the provincial government is being successfully and satisfactorily carried out, and over six hundred miles of rural telephone wires were stretched in 1908.

The past winter has been a very favourable one for cattle and no losses have been experienced on the ranges. The farmers and ranchers are turning their attention to the improvement of their breeding stock, and the days of the doggie and cayuse are past. In this connection I might mention an importation of pure bred stallions and mares recently made by Mr. G. F. Root, one of our progressive ranchers. This is the second importation made by this gentleman, and includes horses from the stables of such well known breeders of high grade stock as M. Medard, M. Tauchean and M. Lecourt, Department of Sarthe, France, and from Messrs. Watson, Woods Bros. and Kelly, of Lincoln, Nebraska, U.S.A. Messrs. Trimble and Richards, also successful ranchers, have imported some choice Ayrshire cattle selected from the best herds in Ontario and Quebec, and Mr. Sharman has imported a herd of thoroughbred Jerseys. When I mention that all these importers live in the immediate vicinity of Red Deer, you will have some idea of the importance of the cattle industry in this district. Whilst the horse and cattle industries have thus been well looked after, our fish and game have not been neglected. In October last the Dominion government made a shipment of young black bass to the west, of which Red Deer secured 1,000, which were successfully planted in Sylvan lake, a beautiful sheet of water, and famous summer resort, some twelve miles west of the town. Pine lake, Gull lake and other lakes were also stocked with these valuable fish, which I have no doubt will do well. The Alberta Fish and Game Association have done much for the protection and propagation of fish and game and have, at a large expense, imported a number of partridges and pheasants, which are doing well.

The creameries and cheese factories in the district have had a most successful year.

Prairie and forest fires have been practically unknown during the past year.

The new Dominion Lands Act, better known as the 'Oliver Act,' is giving general satisfaction. There were comparatively few quarter sections available for pre-emption entry in this district, and most of them have been taken. A large number of South African bounty warrants have been located in this district. Appended is a statement of work for the fiscal year :—

Homestead entries.	20,080	\$ 20,755 00
Pre-emptions.	128	1,280 00
Purchased homesteads.	22	220 00
Inspections.	837	
Cancellations.	1,109	
Improvements.	155	6,288 77
Sales.	54	5,298 65
Sundries.	47	27 60
Letters received.	18,525	
Letters written.	17,127	
Applications for patent.	1,042	
		<hr/>
		\$ 33,870 02

There were 9,230 acres located under South African military bounty warrants and 1,202.9 acres under Northwest Half-breed scrip.

Your obedient servant,

W. H. COTTINGHAM,

Agent of Dominion Lands.

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No. 17.

REPORT OF THE AGENT AT REGINA.

DEPARTMENT OF THE INTERIOR.

DOMINION LANDS OFFICE,

REGINA, SASKATCHEWAN, April 2, 1909.

The Commissioner of Dominion Lands,
Ottawa.

SIR,—I have the honour to submit my report for the fiscal year ending March 31, 1909.

On account of the bulk of the available homesteading lands in this district being disposed of, occasioned by settlement and opening of new land offices, the work in this particular has materially fallen off.

The opening of the odd numbered sections for homesteading and pre-emption entries was a source of satisfaction to settlers who availed themselves of the privilege of securing good lands, and the lands which became vacant in this district at that time were readily taken up.

The work in the other branches has not decreased to any great extent; especially does this refer to the patents and correspondence.

During the past year and more, especially the last few months, I have received a great number of letters from parties in the United States and other countries for information regarding this country as a place of settlement. These inquiries have received prompt attention, and letters as well as literature have been sent them, and the prospects look bright for a large immigration during the present year.

Spring appears to be opening up early and prospects look bright. Settlers and others seem to be recovering from the depression of the last two years and everything seems to point to a good season with prospects of a bountiful harvest.

Appended is a statement of work performed during the fiscal year.

Patents Branch—

Homestead entries.. . . .	1,556	\$ 15,779 00
Pre-emption entries.. . . .	438	4,380 00
Purchased homesteads.. . . .	107	17,575 00
Improvements.. . . .	138	7,593 38
Land sales.. . . .	90	16,832 89
Sundries.. . . .		246 49

Timber and Mines—

Timber permits.. . . .	315	\$ 170 25
Timber seizures.. . . .	2	4 50
Hay permits.. . . .	254	697 50
Grazing rents.. . . .	63	781 71
Sundries.. . . .	3	28 15

Miscellaneous—

School lands sales.. . . .	8	\$ 2,140 77
Seed grain collections.. . . .	33	1,407 42
		<u>\$ 3,548 19</u>

Grand Total.. . . . \$67,637 96

Land scrips located, 13 for.. . . .	2,508	acres.
Letters received.. . . .	37,489	
Letters written.. . . .	34,660	
Applications for patent sent to head office.. . . .	2,743	
Entries cancelled.. . . .	737	

Your obedient servant,

L. RANKIN,

Agent of Dominion Lands.

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No. 18.

REPORT OF THE AGENT AT WINNIPEG.

DEPARTMENT OF THE INTERIOR,
DOMINION LANDS OFFICE.

J. W. GREENWAY, Esq.,

WINNIPEG, MANITOBA, May 25, 1909.

Commissioner of Dominion Lands,
Ottawa.

SIR,—I beg to submit my report upon the working of the Dominion Lands Office, at Winnipeg, for the departmental year ended March 31, 1909.

The volume of business in every branch of the work was considerably larger than that of any previous year in the history of the office. The homestead entries granted numbered 1,865, more than double those of the previous year; the revenue also shows a decided increase, the amount being \$127,949.83 as against \$98,375.70, for the year ended March 31, 1908, of which \$30,141.36 was collected from the following sources:—

1,865 homestead entry fees.. . . .	\$ 18,430 00
53 collections for improvements upon cancelled homesteads.. . . .	1,458 42
58 land sales, cash account.. . . .	4,671 86
14 land sales, scrip account.. . . .	3,837 36
107 townsite lot sales account.. . . .	1,286 30
1,649 township plans, searches, &c.. . . .	457 42
	<hr/>
	\$ 30,141 36
School lands.. . . .	6,218 56
Timber and mines.. . . .	90,885 18
Seed grain.. . . .	704 53
	<hr/>
	\$127,949 83
	<hr/>

The collections on account of school lands represented payments received on 19 land sales, 420 hay permits and on 18 payments in settlement for advances for seed grain and provisions made to the settlers who suffered loss from the grasshopper plague in the seventies, and to Galicians more recently, from flooding of their lands.

The office correspondence was large; no less than 24,382 letters were written and 22,130 received. The number of homestead entries cancelled was 468, while 300 applications for patent were taken.

The year has been a most profitable one for the great majority of the farmers in this district. Crops of all kinds gave good returns, and prices for cereals, dairy and other farm products were high, for which there was an active market. Beef sold at a low price during the summer, but improved later and at present is high and nets the stockman a good margin of profit.

Settlers residing upon homesteads in the bush districts in the northern and eastern portions of this agency will be greatly benefited by the opening of the odd numbered sections for homesteading. The opening up and keeping of roads in repair bore very heavily upon the scattered settlers. It was found difficult to support and maintain churches, and frequently there was not a sufficient number of children in a township to secure a public school. Settlement will be made more compact by the opening of the odd numbered sections, and the difficulties pointed out will soon disappear.

I have much pleasure in stating that the members of the staff attached to the Lands Branch have shown great interest in their work and have rendered faithful service.

Your obedient servant,

E. F. STEPHENSON,

Agent of Dominion Lands.

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No. 19.

REPORT OF THE AGENT AT YORKTON.

DEPARTMENT OF THE INTERIOR,
DOMINION LANDS OFFICE,

YORKTON, SASKATCHEWAN, April 16, 1909.

The Commissioner of Dominion Lands,
Ottawa.

SIR,—I beg to submit for your consideration the report of the transactions of this office for the year ending 31st ultimo.

Homestead entries show a decrease, being 2,183 as against 2,840 of the former year. On September 1 last a number of odd sections were made available for entry, which occasioned some lively scenes again before the office building, but not of a prolonged duration, as by far the larger part of the odd sections in this agency had been appropriated by railway, colonization and land companies, and the applications for entry were taken without undue interference with the ordinary routine business.

Homesteaders who made entry on former Doukhobor lands last year have generally strictly complied with the regulations, being warned that no leniency or laxity would be tolerated in these cases.

The wisdom of furnishing seed grain last year has been fully justified, as, although the season was rather unfavourable to the growth of oats, the staple crop of the district, the samples marketed were of the highest grade and change of seed proved beneficial. The distribution of seed grain and the gathering together of the surplus being entrusted to the homestead inspectors, deranged inspections and placed the work of these officials somewhat in arrears.

The building of the Grand Trunk Pacific Railway through the south part of the agency has brought many settlements within easy transportation distance for grain and other farm products. The extension of the Canadian Pacific northwestern branch, and the proposed building of the Canadian Northern Rosburn branch, together with lines already in existence, will accommodate every homesteader in the district with close market facilities.

The crop last year was a disappointment. Frost touched most of the wheat and dry weather adversely affected oats.

The following is a summary of the work transacted :—

Home-stead entries.....	2,183
Timber permits.....	568
Hay permits.....	199
Letters received.....	29,766
Letters written.....	22,099
Applications for patent.....	1,462
Entries cancelled.....	963
Revenue.....	\$39,812 29

Your obedient servant,

JAS. E. PEAKER,

Agent of Dominion Lands.

No. 20.

REPORT OF THE MINING LANDS AND YUKON BRANCH.

DEPARTMENT OF THE INTERIOR,

OTTAWA, May 22, 1909.

W. W. CORY, Esq.,

Deputy Minister of the Interior,
Ottawa.

SIR,—I have the honour to submit herewith the report of the Mining Lands and Yukon Branch of the Department of the Interior for the fiscal year which ended on March 31, 1909.

Owing to the fact of there being a 'Mines Branch' in the Department of Mines it was thought advisable to change the name of this branch to 'The Mining Lands and Yukon Branch,' not only to avoid conflict in respect of the similarity of names, but also to more correctly give expression to the character and duties of this branch.

The total revenue of this branch derived from all sources during the fiscal year amounts to \$584,157.65, and the statements lettered 'A' and 'B,' showing in different forms how this amount is made up, will be found at the end of the report. Statement lettered 'A' shows the total revenue for each month, and statement lettered 'B' shows the revenue collected at each agency, including the Yukon Territory.

The revenue for the Yukon Territory, which amounts to \$230,171.89, is shown separately in statement lettered 'C.'

The reports and statements for the fiscal year from the gold commissioner, the comptroller, the Crown timber and land agent and the government mining engineer at Dawson, and the assistant gold commissioner at Whitehorse will be found under Part VI. of the general report.

TIMBER IN THE YUKON TERRITORY.

The total amount of dues collected on account of timber in the Yukon Territory during the fiscal year was \$26,482.64.

There are in existence 114 timber berths held under license to cut timber within the territory, covering an area of 269.86 square miles, which licenses were granted prior to May 10, 1906, on which date the regulations governing the granting of licenses to cut timber in the Territory were rescinded, and regulations for the issue of permits to cut such timber substituted therefor. Two saw-mills are in operation within the Territory, one on the Klondike river, near Dawson, and one on Twelvemile river.

According to returns received in the department the number of feet, board measure, of lumber manufactured during the year was 2,129,413, and the quantity sold 2,358,973, a quantity of the lumber having been held over from the previous year. The number of cords of wood cut during the year was 10,545, and the number sold 8,493½. This does not include the very large amount of timber and cordwood cut free of dues for mining purposes.

MINING LANDS OTHER THAN COAL.

During the fiscal year 217 entries for quartz mining claims were granted by the agents of Dominion lands in Manitoba, Saskatchewan and Alberta.

In the Yukon Territory 39,199 placer mining claims, 8,971 quartz mining claims and 64,223 renewals and relocations were recorded up to March 31, 1909.

According to the returns received during the fiscal year 909 entries for placer mining claims, 563 entries for quartz mining claims and 4,385 renewals and relocations were recorded during that period. The revenue collected from these sources and from fees for registering documents in connection with mining operations was \$88,828.50.

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ROYALTY ON GOLD MINED IN THE YUKON TERRITORY.

The total amount collected up to March 31, 1909, for royalty on the gross output of placer mining claims in the Yukon Territory, after deducting the exemption at one time allowed under the regulations, is \$3,704,647.15, of which amount \$81,507.07 was collected during the last fiscal year. For the purpose of estimating this royalty, the gold is valued at \$15 an ounce, which is much below its real value.

The actual value of gold produced from placer mining operations in the Yukon Territory up to the 31st of March last might be safely placed at \$104,952,721.82.

The following statement shows the agencies at which the royalty was collected and the amount collected at each during the year :—

Dawson.....	\$79,791 02
Whitehorse.....	1,715 30
Fortymile.....	0 75

Sixty-nine leases to dredge for minerals, other than coal, in the submerged beds of rivers in the Yukon Territory are now in force, covering a total frontage of 399.26 miles. The total revenue derived from this source up to March 31, 1909, amounts to \$179,672.09, of which amount, \$10,272.07 was collected during the fiscal year. Twelve leases, including 96 miles of the beds of rivers, were issued during the fiscal year.

These leases are confined to the Yukon, Stewart, McQuestion, Fortymile, Big Salmon, Klondike and Hootalinqua rivers.

There are in operation in the Yukon Territory thirteen dredges, nearly all of which have an indicated capacity of 3,000 cubic yards in 24 hours. Several additional dredges have been ordered and will be in operation during the present season.

Forty leases to dredge for minerals in the beds of rivers in the provinces of Alberta and Saskatchewan are in force, covering a total frontage of 199 miles. Of these leases 26 are in the province of Alberta, and include 129 miles, and 14 are in the province of Saskatchewan, and include 70 miles in all. Three leases, including a total frontage of 11 miles of the western shore of Cedar lake, in the Northwest Territories to dredge for amber, are also in force. The total revenue derived from this source up to March 31, 1909, amounts to \$39,455.30, of which amount \$916.27 was collected during the fiscal year.

PETROLEUM.

During the year 21 reservations have been made under the provisions of the regulations to enable the several applicants to conduct petroleum prospecting operations on the tracts reserved. These reservations embraced a total approximate area of 37,622.53 acres, and evidence has been filed in the department to show that at least 17 petroleum prospecting outfits have been installed, and that operations are being actively carried on. Representations have also been made in respect of two of these reservations on the Athabaska river, that oil in paying quantities has been discovered, which representations, however, have not yet been confirmed by an inspection.

HYDRAULIC MINING.

The regulations for the disposal of mining locations in the Yukon Territory to be worked by the hydraulic mining process were withdrawn by order in council, dated February 2, 1904, such withdrawal, however, not to affect leases already granted. Twelve hydraulic mining leases are still in force, covering a total frontage of 38.48 miles. These leaseholds are all situated in the Yukon Territory. Since the regulations were first established in December, 1898, forty-seven hydraulic mining leases have been issued, all of which have now been cancelled with the exception of the above number. Under the grouping provisions of the Placer Mining Act, operators can now acquire and group for operation a sufficient area to warrant the installation of efficient hydraulic machinery.

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WATER RIGHTS.

There are now in force in the Yukon Territory 405 grants to divert water for mining purposes, aggregating a total of 179,480 miner's inches. During the fiscal year 36 water rights were issued comprising 19,050 miner's inches.

Five leases have been issued to divert water for power purposes, including in all 70,000 miner's inches. The works in connection with one of these grants have been completed and are now in active operation, and the works in connection with the remaining four are under construction.

STONE QUARRYING IN ROCKY MOUNTAINS PARK.

Seven leases have been issued for stone quarrying purposes in the Rocky Mountains Park of Canada, comprising a total area of 1,328.56 acres. The revenue derived from such leases during the year amounts to \$236.73.

Outside the park 2,285.75 acres of Dominion lands have been disposed of during the year, the revenue from which amounts to \$1,796.43.

COAL MINING LANDS.

The regulations for the sale of coal mining lands were rescinded on the 5th of March, 1907. These regulations provided for the sale to one applicant of an area not exceeding 320 acres, at the rate of \$7 an acre for the coal mining rights only, and at the rate of \$10 an acre for the surface and coal mining rights. The regulations of the 9th of May, 1907, provide for the leasing to one applicant of the coal mining rights under an area not exceeding 2,560 acres in a compact block, at the rate of \$1 an acre per annum.

As the late regulations for the sale of coal mining lands provided for payment in four equal annual instalments, with interest, the revenue now derived from the sale of such lands is on account of the unpaid balances of the purchase price and interest only.

The total amount collected during the year on account of coal mining lands sold under the provisions of the late regulations was \$276,186.86, of which amount \$271,944.39 was on account of coal lands in the province of Alberta, \$3,578.65 on account of such lands in the province of Saskatchewan, \$96.13 on account of lands in the Railway Belt in the province of British Columbia, and \$567.39 in connection with coal lands in the Yukon Territory. The total amount collected on account of the sale of coal mining lands up to the 31st of March, 1909, was \$1,503,363.63.

The statement lettered 'D' at the end of this report shows the revenue derived from the sale of coal lands for each fiscal year since 1896.

COAL LEASES.

The total number of coal mining leases in force at the close of the fiscal year was 175, including a total area of 84,258.90 acres, distributed as follows :—

In the province of Alberta—

- (a) Within the Rocky Mountains Park of Canada 51 leases, embracing a total area of 22,256 acres ;
- (b) Outside the park, 112 leases, embracing a total area of 61,574.28 acres.

In the province of Saskatchewan 12 leases, comprising an area of 428.62 acres.

The total number of leases of coal mining rights issued during the year was 134, comprising an area of 62,032.90 acres. The total revenue received during the year for rental of coal mining rights was \$65,751.10, of which \$3,718.20 has been paid in advance on account of rental for leases applied for but not yet issued.

The following is a statement showing the revenue collected in the western provinces and in the Yukon Territory on account of the sale of coal lands during the fiscal year, under the provisions of the late regulations :—

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Province of Alberta.. . . .	\$ 271,944 39
Province of Saskatchewan.. . . .	3,578 65
Railway Belt in the province of British Columbia.. . . .	96 43
Yukon Territory...	567 39

Total.. . . . \$ 276,186 86

The revenue derived from leases to mine coal within the Rocky Mountains Park during the fiscal year amounted to \$16,252.44, and was made up as follows:—

Rental...	\$13,516 94
Royalty on coal mined.. . . .	2,735 50

The total amount of rental collected on account of such lands up to the 31st of March last was \$27,606.21, and the total amount of royalty collected up to the same date was \$18,842.

The following is a statement showing the revenue derived during the fiscal year from royalty on coal mined on Dominion lands in the western provinces (except lands in the Rocky Mountains Park) and in the Yukon Territory:—

In the province of Alberta.. . . .	\$2,586 89
In the province of Saskatchewan.. . . .	358 11
In the Yukon Territory...	371 73

Total.. . . . \$3,316 73

The total amount of royalty collected on coal mined up to the 31st of March, 1909, including that of the Rocky Mountains Park is \$30,512.82.

PERMISSION TO PROSPECT FOR COAL.

By an order in council, dated the 16th of February last, regulations were established for the reservation of the coal-mining rights, the property of the Crown, under an area not exceeding 2,560 acres of contiguous land, for a period of two years, for the purpose of enabling the applicant to carry on prospecting operations with the view of discovering coal. An application fee of \$100 is charged, which is applied on account of rental or refunded if failure to discover coal is satisfactorily shown. If the surface has been disposed of the applicant must furnish evidence to show that he has obtained permission from the owner of the surface to enter upon the land before the coal mining rights can be reserved for him. The applicant must expend, in actual prospecting operations by recognized methods on the tract reserved for him during each of the two years covered by the reservation the sum of at least \$1 an acre, and shall be considered the first applicant for a lease of such coal mining rights provided the conditions of the reservation have been fully complied with.

NEW REGISTERS.

During the year a set of township registers, showing the mineral rights that have been disposed of were opened up and completed. These registers not only show the several parcels of mining lands which have been sold or leased by the Crown, but also the lands within each of the townships affected, the surface and mining rights of which have been disposed of to railway companies as a portion of their land grant subsidy. This involved the examination and entry of 1,056 mineral, and 465 coal lands sales distributed as follows:—Total area of mineral sales 210,713.73 acres; total area of coal lands sales, 74,040.02 acres. In the province of Alberta the area of mineral sales is 199,459.51 acres, and the area of coal lands sales, 69,534.93 acres. In the province of Saskatchewan the area of mineral sales is 7,049.13 acres and the area of coal lands sales 1,000 acres. In the Railway Belt, in the province of British Columbia, the area of mineral sales is 700 acres. In the Yukon Territory the area of coal lands sales is 3,505.09 acres.

Within these townships, however, a large number of patents have been issued for the surface rights, which patents do not reserve the mines and minerals. Until these patents have been entered up in the township registers, which would involve a great deal of work, these registers cannot be said to be complete.

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A register of group lots in the Yukon Territory has also been opened, which work has already involved the examination of over 1,800 files, and the condensing of the information contained therein. While this work has not yet been completed, it is progressing satisfactorily, and when finished will be of material assistance in expediting the work of the branch, as the information contained therein will render frequent reference to the officers of the department at Dawson unnecessary, which, in the past, has been responsible for such delays as have occurred in dealing with applications in the Yukon Territory.

The following is a statement of the office work performed during the year :—

Letters received and recorded..	9,816
Letters sent.....	17,047
Pages of memoranda and schedule.....	9,145
Plans and sketches prepared.....	1,184
Accounts kept posted.....	3,935
Accounts rendered.....	6,836
Assignments accepted and registered.....	147
Returns examined and posted.....	1,316
Receipts issued.....	418
Applications for coal locations received covering an approximate area of 441,440 acres.....	296
New entries and renewals for mining locations granted in the western provinces and territories, not including the Yukon.....	217
Applications for stone, gypsum and clay.....	26
Applications for tar, asphalt and petroleum.....	19
Applications for quartz claims in Alberta and Saskatchewan.....	231
Applications for iron claims.....	6
Applications for placer mining claims in Alberta and Saskatchewan.....	10
Applications for dredging leases.....	59
Applications for homestead entry in the Yukon Territory.....	19
Homestead entries granted in the Yukon Territory.....	17
Placer mining grants, renewals and relocations in the Yukon Territory.....	5,294
Quartz mining locations granted, Yukon Territory.....	563
Applications to dredge for sand and gravel.....	8
Requisitions for patent prepared.....	170
Number of files transferred and indexed.....	8,000
Applications to purchase or lease lands in the Yukon Territory.....	57
Applications for water frontage.....	6
Agricultural leases in force in the Yukon Territory, comprising an area of 313.11 acres.....	7
Leases for water frontage issued.....	1
Water front leases in existence.....	18
Gold dredging leases issued.....	14
Coal mining leases issued.....	134
Timber licenses prepared.....	114
Stone quarrying leases issued.....	1
Stone quarrying leases in the Rocky Mountains Park of Canada issued, comprising a total area of 1,322.56 acres.....	7

I have the honour to be, Sir,

Your obedient servant,

H. H. ROWATT,

Chief of Branch and Secretary of the Yukon.

REVENUE OF DOMINION LANDS

A.—STATEMENT of Receipts on account of Coal and Minerals in the Provinces and Territories, Fees, Rental of Agricultural Lands, Water Power and Water Fronts, Survey Fees

Months.	Improvement.	Confiscated Gold Dust.	Sale of Quartz Acreage.	Yukon Homestead Fees.	Yukon Timber Dues.	Coal Mining.	Mining Fees.	Yukon Hydraulic Leases.	Dredging Leases, Alberta and Saskatchewan.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1908.									
April.....			33 01		509 46	2,675 06	4,960 00	956 90	...
May.....			66 68	10 00	2,882 31	4,331 61	7,118 00	...	51 00
June.....			141 33	10 00	2,058 98	2,704 45	11,890 75	150 00	...
July.....			802 68		1,033 50	2,492 61	14,235 50	...	100 00
August.....			299 48	30 00	1,929 86	1,850 18	7,000 00	300 00	...
September.....			101 00	20 00	3,053 00	2,912 05	10,266 50	507 00	200 00
October.....			1,051 54		4,093 68	27,266 53	12,254 25	337 50	...
November.....	135 00		176 90	10 00	2,600 12	1,740 66	5,079 45	1,009 82	404 37
December.....			73 52		2,271 79	1,456 80	4,656 50	74 88	...
1909.									
January.....			285 17		1,460 31	8,977 68	5,027 50	1,152 74	20 90
February.....		75 50	56 65		3,418 88	1,656 31	4,866 40	...	...
March.....			534 80		1,269 75	13,739 39	4,276 50	...	140 00
Total ..	135 00	75 50	3,622 76	80 00	29,482 64	71,803 33	92,531 35	4,488 81	916 27

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INCLUDING THE YUKON TERRITORY.

tories, also Timber, Hay, Coal, Hydraulic Mining, Dredging, Royalty on Gold, Mining and Sale of Dominion Lands in the Yukon, for the Fiscal Year 1908 and 1909.

Dredging Leases, Yukon.	Gold Export Tax.	Free Certificates Export of Gold.	Rental, Yukon.	Registration Fees.	Hay, Yukon.	Water Power, Yukon.	Sale of Dominion Lands other than Coal, Yukon.	Stone Quarries.	Sale of Coal Lands.	Amount.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
31	355 14	1 00	5 00	4 50	.....	.....	267 53	126 84	14,982 10	24,876 85
100 00	2,569 49	1 00	4,518 50	2 50	32 00	.....	585 02	.....	8,843 58	31,111 69
.....	19,324 13	20 00	2,128 85	6 00	34 00	250 00	227 77	.....	13,750 67	52,606 93
.....	13,234 18	20 50	2,077 55	.....	69 00	.....	176 51	285 00	15,131 24	49,658 27
1,350 00	14,074 16	20 00	.....	.....	5 50	.....	276 90	27 86	32,511 92	60,566 86
69 65	14,870 54	66 00	.....	6 00	.....	.....	764 43	46	8,858 70	41,695 33
3,100 00	13,886 01	29 00	2 66	2 00	.....	.....	627 54	43 15	4,625 00	67,228 86
4,000 00	746 05	1 50	15 00	4 00	.....	.....	453 69	.....	74,893 84	91,270 40
.....	2,059 90	2 50	.....	.....	.....	.....	199 65	313 42	29,499 55	40,608 48
.....
1,000 00	26 07	1 50	.....	14 00	.....	.....	60	.....	9,614 87	27,581 34
515 65	43 25	2 00	.....	2 00	.....	.....	544 51	145 00	43,524 78	54,850 93
136 46	318 15	1 00	1,080 30	.....	.....	.....	363 37	201 38	19,950 61	42,011 71
10,272 07	81,507 07	166 00	9,827 86	41 00	140 50	250 00	4,487 52	1,143 11	276,186 86	584,157 65

H. H. ROWATT,
Chief of Branch.

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DOMINION LANDS

B.— STATEMENT showing the Total Amount of Revenue Collected at each Agency,

Revenue received at Head Office, on account of the sale of coal lands in the Western Provinces

Agency.	Sale of Coal Lands.	Sale of Dominion Lands other than coal, Yu- kon.	Sale of Quartz Acreage.	Timber Dues.	Coal Mining.	Mining Fees.	Hydraulic Leases.	Dredging Leases N.W.T.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Banff					13,516 94	4 75		
Battleford					25 00			
Calgary	34,132 80				525 25	140 00		
Dauphin						5 00		
Edmonton	32,263 78				2,000 90	641 00		
Estevan	2,533 41				170 00			
Kamloops					15 00			
Lethbridge	196,948 35				3,480 00	60 00		
Moosejaw	125 24				20 00			
New Westminster	96 43		1,034 80		30 00			
Prince Albert						847 50		
Red Deer	8,599 46				379 00			
Winnipeg	920 00		152 66			657 50		
Ottawa					45,574 01	1,347 10	2,341 72	916 27
Dawson Gold Com- missioner's Office						71,504 50	2,147 09	
Duncan Mining Re- corder's Office						7,174 00		
Sixty-mile Mining Recorder's Office						2,008 00		
Whitehorse Asst. G. Commis.'s Office						3,337 00		
Kluane Mining Re- corder's Office						2,117 00		
Conrad Mining Re- corder's Office						2,688 00		
Dawson Crown Tim- ber Office				21,646 39				
Whitehorse Crown Timber Office				4,836 23				
Dawson Comptrol- ler's Office								
Dawson Royalty Col- lector's Office								
Whitehorse Royalty Collector's Office								
Forty-mile Royalty Collector's Office								
Whitehorse Comp- troller's Office								
Dawson Dominion Lands Office	567 39	1,177 71						
Dawson Mining Re- corder's Office			510 41					
Conrad Dominion Lands Office			1,148 11					
Whitehorse Domin- ion Lands Office		3,309 81			15 00			
Whitehorse Mining Recorder's Office			776 78					
Totals	276,186 86	4,487 52	3,622 76	26,482 64	65,751 10	92,531 35	4,488 81	916 27

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REVENUE.

including the Yukon Territory, for the Fiscal Year ending March 31, 1909.

is, in this statement, credited to the several agencies in which the lands affected are situated.

Dredging Leases Yukon.	Gold Export Tax.	Free Certificates Export of Gold.	Coal Royalty.	Rental, Yukon.	Stone Quarrying	Improvements.	Registration Fees.	Homestead Fees.	Confiscated Gold Dust.	Hay.	Water Power, Yukon.	Amount.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
			2,735 50		236 73							16,493 92
			598 95									25 00
			388 03									35,392 00
			250 25									5 00
			233 47									35,293 71
			8 56									2,953 66
												15 00
												200,721 82
												153 80
					25 00							1,186 23
			624 40									847 50
												9,602 86
												1,730 16
1,456 42			846 34	1 00	881 38						250 00	53,614 24
8,815 65												82,467 24
												7,174 00
												2,008 00
												3,337 00
												2,117 00
												2,668 00
			371 73							140 50		22,158 62
												4,836 25
		165 00							75 50			240 50
	79,791 02											79,791 02
	1,715 30											1,715 30
	75											75
		1 00										1 00
				7,009 36		135 00	34 50	70 00				8,993 96
												510 41
												1,148 11
				2,817 50			6 50	10 00				6,158 81
												776 78
10,272 07	81,507 07	166 00	6,052 23	9,827 86	1,143 11	135 00	41 00	80 00	75 50	140 50	250 00	584,157 65

H. H. ROWATT,
Chief of Branch.

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D.—STATEMENT showing the total revenue derived from the sale of coal land for each fiscal year since 1896.

Fiscal Year.	Amount.
	\$ cts.
1896-1897.....	75 76
1897-1898.....	1,833 74
1898-1899.....	350 00
1899-1900.....	5,630 33
1900-1901.....	101,772 00
1901-1902.....	16,270 32
1902-1903.....	31,055 38
1903-1904.....	68,949 75
1904-1905.....	35,605 00
1905-1906.....	125,754 12
For the nine months ending March 31, 1907.....	335,795 97
1907-1908.....	346,813 23
1908-1909.....	276,186 86

H. H. ROWATT
Chief of Branch.

YUKON REVENUE.

E.—STATEMENT showing the total Gold Production, the total subject to Royalty, and the total Royalty collected for each Fiscal Year from May 1, 1898, to March 31, 1909.

Fiscal Year.	Gold Production.	Subject to Royalty.	Royalty Collected.	Total Revenue.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1897-1898.....	3,072,773 20	2,732,928 20	273,292 82	273,292 82
1898-1899.....	7,582,283 02	5,882,626 00	588,262 37	589,943 52
1899-1900.....	9,809,464 64	7,307,720 00	730,771 99	733,041 04
1900-1901.....	9,162,082 79	7,234,416 17	592,660 98	596,368 03
1901-1902.....	9,506,340 52	8,367,225 88	331,436 79	331,532 04
1902-1903.....	12,113,015 34	12,113,015 34	302,893 48	302,893 48
1903-1904.....	10,790,663 12	10,790,663 12	272,217 96	272,217 96
1904-1905.....	8,222,053 91	8,222,053 91	206,760 87	206,760 87
1905-1906.....	6,540,007 09	6,540,007 09	163,963 25	163,963 25
1906-1907.....	3,304,791 05	3,304,791 05	82,622 42	82,622 42
1907-1908.....	2,820,161 60	2,820,161 60	70,504 65	70,504 65
1908-1909.....	3,260,282 80	3,260,282 80	81,507 07	81,507 07
Total.....	86,243,919 08	78,575,891 16	3,696,894 65	3,704,647 15

H. H. ROWATT,
Chief of Branch.

No. 21.

REPORT ON TIMBER, GRAZING AND IRRIGATION.

DEPARTMENT OF THE INTERIOR,

OTTAWA, June 14, 1909.

W. W. CORY, Esq.,

Deputy Minister of the Interior,

Ottawa.

SIR,—I have the honour to submit the report of the Timber, Grazing and Irrigation Branch for the fiscal year ending March 31, 1909.

During the year provision was made for the issue of permits in the Railway Belt in the province of British Columbia to cut fire-killed timber for the manufacture of lumber, cordwood, telegraph poles, ties and fence posts, but beyond this no amendments of importance were made to the timber or grazing regulations.

The revenue derived from timber, grazing and hay lands, and irrigation, for the fiscal year amounted to \$308,115.95, a decrease of \$202,128.15 as compared with the fiscal year ending March 31, 1908. This decrease is mainly due to the fact that during the fiscal year no timber berths were disposed of at public auction and to the depression in the lumber trade, which, however, is showing signs of renewed activity. It may be stated that during the fiscal year ending March 31, 1908, the sum of \$212,067.05 was received as bonuses on timber-berths disposed of.

Statement 'A,' showing the total revenue of the branch from its various sources, will be found at the end of this report.

Reports from the Crown timber agents at Calgary, Edmonton, Prince Albert, Winnipeg and New Westminster, showing the revenue collected on Dominion lands within their respective agencies and other information, are appended hereto. The report of the Inspector of Ranches is also attached. The report of the Commissioner of Irrigation will be found with the report of the Forestry Branch.

The total revenue from timber, grazing and irrigation received at the Crown timber agencies above mentioned, together with the ruling price of lumber and the number of mills in each agency, may be summarized as follows:—

Agency.	Total Revenue.	Average price of lumber per M. ft. B.M. at mills.	No. of mills operating under license.	No. of portable mills in operation.
	\$ cts.	\$ cts.		
Calgary.....	24,615 81	14 91	16	18
Edmonton.....	22,080 26	13 70	9	17
Prince Albert.....	43,229 34	17 54	6	6
Winnipeg.....	93,411 58	14 55	36	21
New Westminster.....	55,736 25	14 20	16	Nil.

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Saw-mill returns received at the department give the following quantities of building material as having been manufactured and sold under government license during the year in the above mentioned agencies:—

	Manufactured.	Sold.
Sawn lumber, ft. B.M.	162,940,499	183,375,022
Shingles		10,000
Shingle bolts, cords	18,110½	19,226½
Laths	20,120,150	31,979,210

The quantity of lumber manufactured and sold within each agency will be found in the agents' reports appended hereto.

During the year 747 timber licenses were prepared, in duplicate, and issued.

The areas of timbered lands under license and permit in the provinces of Manitoba, Saskatchewan and Alberta, and within the Railway Belt in the province of British Columbia, on March 31, 1909, were as follows:—

	Under License.	Under Permit.
	Sq. miles.	Sq. miles.
Manitoba.	1,207·83	710·43
Alberta	2,655·45	357·94
Saskatchewan	2,338·06	422·02
British Columbia	2,089·00	23·57
Total.	8,290·34	1,513·96

Of the above area held under permit 25·57 square miles are covered by portable saw-mill permits: 6·50 square miles by cordwood permits; and 301·96 square miles by permits issued to cut ties for railway construction purposes.

During the year there were received 296 applications to cut timber. The number of berths granted was 71, of which 21 are portable saw-mill berths. The total number of berths covered by permit is 221.

GRAZING LANDS.

There are 990 grazing leases in force, which cover a total area of 3,191,601·70 acres, distributed as follows:—

	Acres.
Province of Manitoba.	6,174
Province of Saskatchewan.	605,159
Province of Alberta.	2,088,736
Railway-Belt, British Columbia.	491,532·70
Total.	3,191,601·70

IRRIGATION.

A full report of irrigation matters dealt with by this branch will be found in the report of the Superintendent of Forestry.

OFFICE WORK.

The following is a partial statement of the office work performed at Ottawa for the fiscal year ending March 31, 1909:—

Letters received and recorded.	20,175
Letters sent.	23,635
Plans and sketches prepared.	4,704
Cash receipts issued in quadruplicate.	1,679
Timber and grazing assignments registered.	139

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TIMBER.

Berths applied for.	296
Berths granted to cut railway construction timber.	34
Portable saw-mill berths granted.	21
Cordwood berths granted.	14
Berths granted to cut mining timber.	2
Licenses for timber berths prepared in duplicate.	747
Instructions issued for survey of timber berths.	49
Returns of survey of timber berths examined and re-examined.	83
Returns of operating saw-mills verified and posted.	2,532
Timber permits checked and entered.	10,171
Ledger accounts kept posted.	968
Seizures checked and entered.	404
Fire-guarding accounts posted.	968

GRAZING.

Applications for grazing lands received.	479
Leases of grazing lands issued.	161
Applications for hay lands received.	58
Ledger accounts kept posted—grazing.	990
Ledger accounts kept posted—hay.	2
Hay permits checked and entered.	1,969

Your obedient servant,

B. L. YORK.

REVENUE OF DOMINION LANDS.

A.—STATEMENT of Receipts on Account of Timber, Grazing, Hay and Irrigation for the fiscal Year ending March 31, 1909.

Year.	Month.	Timber.	Grazing.	Hay.	Irrigation.	Total.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1908..	April	24,316 98	2,101 61	1,379 40	23 00	27,820 99
	May	30,988 65	3,803 83	941 90	52 75	35,787 13
	June	17,074 15	4,506 12	1,187 45	21 25	22,788 97
	July	20,477 15	3,697 44	1,813 10	26 50	26,014 19
	August	11,391 30	10,068 35	352 15	16 75	21,828 55
	September	17,875 44	2,503 29	27 60	25	20,406 58
	October	15,857 02	4,555 49	20 40	12 50	20,445 41
	November	16,568 57	5,619 59	13 20	50 00	22,251 36
	December	18,629 84	10,607 30	18 40	3 75	29,259 29
1909..	January	31,838 50	2,233 51	3 90	61 50	34,137 50
	February	24,436 29	3,441 94	6 70	50 25	27,935 18
	March	15,763 04	3,612 16	17 10	48 50	19,440 80
		245,217 02	56,750 63	5,781 30	367 00	308,115 95

Timber Dues made up as follows:

Rent	\$ 60,171 55
Royalty	103,207 20
Permit	65,297 21
Seizures	16,541 06

\$ 245,217 02

F. LOYER,

Bookkeeper, Timber, Grazing and Irrigation Branch.

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No. 22.

REPORT OF THE INSPECTOR OF CROWN TIMBER OFFICES.

DEPARTMENT OF THE INTERIOR,

WINNIPEG, MANITOBA, May 26, 1909.

J. W. GREENWAY, Esq.,

Commissioner of Dominion Lands,
Ottawa.

SIR,—I have the honour to submit my annual report in connection with my work as inspector of Crown timber offices for the departmental year ended March 31, 1909.

I visited during the year all the more important offices in Manitoba, Saskatchewan, Alberta and British Columbia, and made a thorough inspection of the books and accounts. My reports regarding this work were sent forward to you as inspections were made. Where there were forest rangers attached to an office they were called in, when their work was taken up and discussed with them and the agent.

All outstanding and unsettled business was gone into, and decision reached as to the action to be taken in the endeavour to effect settlement.

Apart from royalty dues on coal mined the collections are well up and the accounts in fairly satisfactory standing.

There are a large number of expired timber permits outstanding in the books of all the offices. Notices have been sent out to the permittees time and again with but poor result. Lists have been prepared for the forest rangers, who are under instructions to make collection as opportunity offers in the round of their regular duties.

There are but few unsettled seizures. These are receiving the attention of the agents and rangers. While the timber end of the business in all of its details is not being as efficiently dealt with in some of the agencies as could be desired, it is due to the smallness of the staff employed in connection with the work.

It would be a practical impossibility to wholly put a stop to the illegal cutting of timber on the public domain, owing to scattered settlement and the wide area covered by timber. Special attention has been paid to the operations at portable saw-mills and to the cutting of timber as a speculation. The number of timber seizures made during the year in the respective agencies is shown on statement 'A' appended.

Steps are being taken to give closer supervision than has taken place in the past over the operations of the holders of timber berths by license and permit. They will be required in future to conform more strictly to all the requirements of the regulations in the matter of the keeping of bush records of their cutting, of marking the timber cut by a stamp approved by the department, and furnishing at the end of each season of cutting a ground sketch, showing the place or places where timber was cut on the berth. Regular inspections will be made of the sales records of the millmen and stock will be taken of the lumber in their possession. This work has been done in the past in some of the Crown timber agencies, but not thoroughly and systematically, as it is intended it should be carried on in the future.

LUMBER.

The lumber industry has not recovered from the depression of two years ago, and it is claimed by the operators that the business has not been profitable.

There has been a falling off during the year of fully 15 and 20 per cent in the sales made, wholesale and retail, respectively.

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The coming season looks brighter for the trade as money is more plentiful and building is taking place in all parts of the country on an extensive scale. There is an ample supply of Canadian lumber on hand to meet all demands. The present prices are reasonable, being lower than for some years past, and it is not expected that any advance will be made unless at points free from competition.

Very little lumber is now brought in from the United States. Apart from that imported by the Grand Trunk Pacific Railway for construction purposes the amount during the past year would not exceed 7,000,000 feet, board measure, of which quantity there would be less than 1,000,000 feet of hardwoods, the balance fir, principally from the state of Washington.

The cut of logs this past year on Dominion lands has been lighter than for some years previously. The falling off occurred largely in the railway belt in British Columbia, where the millmen obtained their supply chiefly from the lands of the provincial government, the reason for this being that owing to the much heavier ground rent charged by the province for lands held under license it is cheaper to carry Dominion timber for which only a nominal ground rental is charged.

I append hereto the following summary statements, namely :—

A.—Summary of work performed at the respective offices during the year ending March 31, 1909, showing number of transactions under various heads, and amount of revenue collected.

B.—Statement showing manufacture and sale of timber products by the holders of timber berths on Dominion lands during the twelve months ended March 31, 1909.

C.—Statement showing timber material covered by permits issued at the respective agencies during the year ended March 31, 1909.

For purposes of comparison I have given the totals under the headings of each of the above statements for the previous year of 1907-8. It is quite interesting to note the changes that have taken place.

I would again respectfully draw the attention of the department to the large number of roof poles and fence rails authorized to be cut by settlers under free permits issued to them. As pointed out in my last annual report, this class of timber is not to any extent now used by the settler; sawn lumber (scantling) is almost wholly used in roofing, and posts and wire for fencing. In my opinion it would be in the public interest to withdraw the privilege from the settler of cutting this class of timber, which takes a young healthy tree in the manufacture of each piece.

Respectfully submitted,

E. F. STEPHENSON,
Inspector of Crown Timber Agencies.

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STATEMENT A.—SUMMARY of Work Performed at the Respective Offices during the year ending March 31, 1909, showing Number of Transactions under Various Heads and Amount of Revenue Collected.

Agency.	Bonus.	Ground Rent.	Royalty on Timber Sales.	Timber Permits.	Timber Seizures.	Hay Permits.	Grazing Rents.	Mining Fees.	Coal Lands Royalties, &c.	Stone Quarries.	School Lands Revenue.	Sundries.	Total Revenue for Year.
													\$ cts.
Battleford ..				356	11	110			7		130		1,282 22
Brandon ..				460		26					177 4		1,335 61
Calgary ..	26	31		677	10	135	87	38	60		144		27,803 97
Dauphin ..				1,432	98	90	12	1					10,197 71
Edmonton ..	66	68		1,853	46	262	1	39	83		not given		24,312 64
Estevan ..				324		283	34		39				1,904 70
Humboldt ..				415		60					150		1,042 07
Kamloops ..						9	302		3				8,509 17
Lethbridge ..				402	6	124	249	not given	not given				42,602 92
Moosejaw ..			1	736		429	69		2	4	141 2		4,835 76
New Westminster ..	333	149		94	17								48,787 39
Prince Albert ..	38	38		1,357	56	176		115			not given		39,935 13
Red Deer ..				423	1	28			106		189		2,562 29
Regina ..				315	2	254	63					3	1,682 11
Yorkton ..				568	2	89					134		1,093 40
Winnipeg ..	112	132		1,185	57	257	6	99			414 6		93,705 61
Totals for year ending March 31, 1909 ..	575	419		10,617	306	2,342	823	294	302		1,479 15		311,592 70
Totals for year ending March 31, 1908 ..	6	448	387	10,801	178	2,315	740	161	318 11		1,064 12		329,339 04

This statement does not account for revenue paid direct to the department at Ottawa on account of business of the agencies, which would mainly be on account of bonus and ground rent.

E. F. STEPHENSON.

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STATEMENT B.—Showing Manufacture and sale of Timber Products by Holders of Timber Berths on Dominion Lands during the twelve months ending March 31, 1909.

LICENSE.

Agency.	LUMBER, FEET—BOARD MEASURE.			LATHS.			Railway Ties Manu- factured.	SHINGLES.	
	Manufactured.	On Hand.		Manu- factured.	On Hand.			Manu- factured.	On Hand.
		Sold.			Sold.				
Calgary	13,730,588	11,211,737	10,012,964	1,332,430	1,311,380	21,050	9,681		
Edmonton	9,679,117	7,112,690	8,304,652	1,189,960	983,350	869,528	8,089		
New Westminster	53,923,157	54,621,244	28,718,487	7,810,470	12,352,030	3,713,720	25,000	18,110½	6,148½
Prince Albert	39,435,674	48,734,960	20,670,864	9,787,750	17,332,350	4,734,200	138,036		Bolts
Winnipeg	46,171,963	61,694,391	43,518,001						
Total for year ending March 31, 1909	162,940,499	183,375,022	112,224,968	20,120,150	31,979,210	9,338,498	180,806	18,110½	6,148½
Total for year ending March 31, 1908	207,532,730	180,909,384	139,805,143	29,551,839	17,059,889	22,361,860	1,540,674	9,519½	7,990½

PERMIT.

Calgary.....	7,210,191	5,456,779	2,596,646				92,507	256,000	88,000
Edmonton.....	5,971,499	4,455,063	4,822,107				26,798		
New Westminster.....	NIL	NIL	NIL						
Prince Albert.....	299,679	188,281	188,281				8,673		
Winnipeg.....	5,289,311	5,631,695	2,317,158				8,205		
Total for year ending March 31, 1909.....	18,868,961	15,753,216	9,926,192				136,183	266,000	88,000

E. F. STEPHENSON.

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STATEMENT C.—TIMBER MATERIAL COVERED BY PERMITS ISSUED AT THE RESPECTIVE AGENCIES DURING THE YEAR ENDING MARCH 31, 1909.

Agency.	Lumber and Logs, Feet, B.M.	Roof Poloa.	Fence Posts.	Fence Rails.	Cardwood, Cords.	Mine Props.	Shingles.	Railwa Ties.
Battleford.....	2,494,689	76,140	99,806	371,700	3,595			
Brandon.....	249,930	7,135	2,880	100	6,924			
Calgary.....	5,989,847	207,458	251,643	1,124,701	16,616			
Dauphin.....	3,305,987	22,200	70,300	73,200	8,757		15,000	
Edmonton.....	9,960,226	372,892	438,226	1,855,339	1,089		36,000	
Estevan.....	638,220	41,350	40,870	66,325	4,155			
Humboldt.....	3,086,686	38,210	46,885	59,730	1,025			
* Kamloops.....	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
Lethbridge.....	2,948,677	138,870	153,317	718,867	4,069	3,000		
Moosejaw.....	3,150,010	197,296	273,754	885,680	7,089			
New Westminster.....	3,287,849	450	2,550		1,290½			
Prince Albert.....	5,916,085	185,882	899,012	302,408	18,344		Cords, bolts. 423	4,902
Red Deer.....	2,968,946	80,362	109,325	406,215	5,667			
Regina.....	834,000	52,075	37,850	78,090	3,320			
Yorkton.....	3,281,515	76,687	91,785	326,405	3,121			
Winnipeg.....	2,108,221	23,640	61,326	68,350	20,935			
Total for year ending March 31, 1909...	50,152,088	1,526,847	2,579,443	6,329,020	106,036½	3,000	51,000 { Cords, bolts. 923	601,652
Total for year ending March 31, 1908...	57,170,935	1,654,940	2,831,028	6,522,425	190,292¾			

* Timber business for Kamloops Agency transacted at New Westminster office.

E. F. STEPHENSON.

No. 23.

REPORT OF THE CROWN TIMBER AGENT AT WINNIPEG.

DEPARTMENT OF THE INTERIOR,
CROWN TIMBER OFFICE,

WINNIPEG, MANITOBA, May 26, 1909.

J. W. GREENWAY, Esq.,
Commissioner of Dominion Lands,
Ottawa.

SIR,—I have the honour to submit my report upon the Timber and Grazing Branch of the department for the year ending March 31, 1909, to which are appended the following classified statements:—

A.—Classified statement showing revenue collected on account of Dominion lands for timber, grazing and hay permits during the year.

B.—Schedule giving list of names of the respective holders of timber berths held under license who are conducting operations, and the extent thereof.

C.—Schedule showing the mills (including portable mills) operated within the Winnipeg agency under government permits.

D.—Schedule, being general office return of the Crown timber agency, Winnipeg.

LUMBER SALES.

The statement given hereunder, showing the amount of lumber and other products of timber sold within this district, exclusive of imports from the United States, was compiled from particulars procured from reliable sources, and may be accepted as approximately correct :—

	1907-08. Feet B.M.	1908-09. Feet B.M.
From province of Ontario, west of Lake Superior—		
From Canadian logs.	58,000,000	51,000,000
From American logs.	50,000,000	40,000,000
From province of British Columbia.	92,000,000	100,000,000
From mills operating under Dominion license	53,485,361	61,694,391
From mills operating under Dominion permit	13,500,000	5,631,695

For purposes of comparison I give hereunder the selling price of the different classes of lumber during the year which ended on March 31, 1908, with that for the year ended March 31, 1909.

<i>Pine, cedar and fir—</i>	1907-08. Per M. feet B.M.	1908-09. Per M. feet B.M.
Dimension lumber. . . . .	..\$18 00 to \$25 00	\$18 00 to \$25 00
Fir for interior finishing.	40 00 to 50 00	40 00 to 50 00
Flooring, siding and ceiling.	33 00 to 40 00	33 00 to 40 00
Shiplap and common boards.	21 00 to 23 00	20 00 to 23 00

Spruce—

Dimension lumber. . . . .	..\$18 00 to \$25 00	\$18 00 to \$20 00
Siding, flooring and ceiling.	23 00 to 28 00	23 00 to 28 00
Shiplap and common boards.	18 00 to 24 00	18 00 to 24 00
Lath.	4 00 to 5 00	3 75 to 5 00
Shingles.	3 00 to 3 65	2 70 to 3 00

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The figures given hereunder give approximately the sales of coal and wood during the same year:—

	1907-08. Tons.	1908-09. Tons.
American anthracite..	140,000	145,000
American bituminous..	150,000	150,000
Canadian anthracite..	40,000	42,000
Canadian bituminous..	61,731	73,800
Canadian lignite..	120,000	146,000
Total..	511,731	556,800

These figures are exclusive of coal used in connection with the operations of the railroads.

The following retail prices were obtained at Winnipeg :—

	1907-08. Per Ton.	1908-09. Per Ton.
American anthracite..	\$10 50	\$10 50
American bituminous..	8 00 to 8 50	7 00 to 8 50
Canadian anthracite..	10 00	10 00
Canadian bituminous..	8 00 to 9 00	8 00
Canadian lignite..	5 00 to 5 50	5 00 to 5 50

CORDWOOD.

The sales of cordwood in the city of Winnipeg and town of St. Boniface during the year amounted to about 98,000 cords. The retail price charged per cord was for poplar, \$2.75 to \$3.75; spruce and jackpine, from \$4 to \$4.75, and tamarack, from \$5.50 to \$6.

The wood was principally taken from Dominion and provincial lands under the authority of permits.

REVENUE.

The total revenue collected from all sources at this office during the year amounts to \$127,949.83, made up as follows :—From Dominion Lands Branch, \$30,846.09; Crown Timber Branch, \$90,057.57, and from school lands, \$6,232.96.

The revenue from mines for the same period amounted to \$805.16.

The increase in revenue derived from timber, grazing and mines over the preceding year amounts to the sum of \$14,884.85.

TIMBER PERMITS.

The number of timber permits issued to settlers from this office during the year was 989, including 30 on school lands, covering the following quantity of timber.

For purposes of comparison I likewise give the quantities for previous year under the heading of seizures.

Dominion Lands—

	1907-8.	1908-9.
Building logs (lineal ft.)..	318,071	290,837
Lumber (ft. B.M.)..	1,131,244	1,235,710
Roof poles..	35,885	23,640
Fence rails..	94,635	68,350
Fence posts..	77,976	61,520
Cordwood..	51,082	20,419

School Lands—

Building logs (lineal ft.)..	600	Nil.
Cordwood..	2,820	516

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SEIZURES.

During the year 63 seizures were made covering timber cut on Dominion lands, including 6 seizures on school lands, as follows:—

<i>Dominion Lands—</i>	1907-8.	1908-9.
Building logs (lineal ft.)	8,436	43,365
Lumber (ft. B.M.)	205,365	1,678,572
Railway ties	4,685	35,634
Fence posts	700	17,593
Cordwood	1,673	2,640½
Telegraph poles	Nil.	48
<i>School Lands—</i>		
Lumber (ft. B.M.)	1,000	20,000
Railway ties	1,423	2,795
Fence posts	350	300
Cordwood	193	Nil.
Telegraph poles	185	Nil.

HAY.

The number of settlers acquiring permits to cut hay upon Dominion and school lands was 600, aggregating 12,736 tons. During the previous year 738 permits were issued, covering 16,108 tons of hay.

FOREST FIRES.

Very little damage to the timber from fire was reported during the year. Greater care is being exercised by the public in regard to setting out fires to keep them under control, due in a large measure to the action being taken by the Forestry Branch to post the settlers in the law, and to enforce it against trespassers.

Your obedient servant,

E. F. STEPHENSON,
Crown Timber Agent.

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SCHEDULE A.—STATEMENT of receipts from Crown Timber Agency at Winnipeg for fiscal year ending March 31, 1909.

Month.	Bonus under License.	Ground Rent under License.	Royalty Dues under License.	Permit Fees, Dues and Rental.	Seizures.	Grazing Lands Rentals.	Hay Permits, Fees and Dues.	Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1908.								
April.	541 64	1,514 18	1,434 08	848 26	.....	195 30	4,533 46
May.	413 15	1,857 62	5,472 85	161 64	.....	51 30	7,956 56
June.	1,636 03	3,025 26	2,435 36	362 78	.....	71 35	7,530 80
July.	495 76	1,589 46	534 16	.....	4 45	199 15	2,822 98
August.	1,577 35	1,900 58	1,575 83	173 56	.....	21 00	5,948 32
September.	376 87	3,618 23	8,257 18	274 48	1 20	4 00	12,571 96
October.	1,081 24	3,548 33	1,101 61	2,014 53	3 20	11 00	7,759 91
November.	660 15	397 10	1,389 48	.....	.....	.....	2,446 73
December.	4,671 79	4,891 39	32 60	1 00	1 00	9,008 38
1909.								
January.	439 45	7,319 03	7,193 00	892 73	.....	.....	15,844 21
February.	4 50	5,786 28	739 15	651 80	.....	0 40	7,163 13
March.	269 40	2,812 62	2,176 29	1,384 52	4 45	.....	6,677 68
Totals.	7,525 54	38,040 50	37,131 38	6,797 30	14 90	554 50	90,064 12
Collected at head office.	3,176 40	111 06	.....	60 00	.....	.....	3,347 46
	10,701 94	38,151 56	37,131 38	6,857 30	14 90	554 50	93,411 58

NOTE.—Less \$6.55, amount paid on account ground rent Berth No. 903, transferred to School Lands Branch.

E. F. STEPHENSON,
Crown Timber Agent.

SCHEDULE C.—Showing the Mills (including the Portable Mills) operating within the Winnipeg Agency, under Government Permits, for the Fiscal Year ending March 31, 1909.

PORTABLE SAW-MILL BERTHS ONLY.

No.	Mill Owner.	Location of Mill.	Berth No.	Species of Timber Cut.	LUMBER.			LOG COUNT.			Average Log Ft. B. M.
					Manu- factured Ft. B. M.	Sold Ft. B. M.	On hand Ft. B. M.	Logs Cut.	Logs Manufac- tured.	Logs on hand.	
1	Blackburn & Somerville.	27-32-20 W 1.	1508	Tamarack and spruce.	385,000	185,200	200,000	7,295	7,295		52
2	Buteau, W. F.	27-39-25 W 1.	1519	Spruce.	293,200	268,200	25,000	4,495	4,495		65
3	Fulton, Thos.	9-23-2 W 1.	1345	"	137,000	125,650	12,000	3,103	1,666	1,437	82
4	Gamache, Pierre.	24-18-18 W 1.	1483	"	75,775	91,799		2,000	2,000		37
5	Hall, Erick	2-20-1 E 1.	S. L. 42	"		40,000		5,500			
6	Hosie, Walter G.	20-23-4 E 1.	1509	Tamarack and spruce.	22,500	32,500			900	5,500	
7	Helgason, Johannes.	19-22-6 W 1.	1373	Spruce.	70,000	50,000	20,000	1,600	1,600		25
8	Hodgins, Alex.	30-22-6 W 1.	1550	"	35,000	39,000		900	500		43
9	Hodgins, Alex.	27-22-23 W 1.	1572	Tamarack, spruce, jackpine and poplar.						400	70
10	Klimes, C. R.										
11	Loewen, C. T.	Steinbach	S. L. 61	Tamarack and spruce.	150,000	150,000		6,200	6,200		24
12	Marchanski, J.	Net Point	1542	Spruce.	31,320	320	31,000	4,215	670	3,545	46
13	McDougall, Alex.	19-23-11 W 1.	1508	"	116,270	116,270		3,323		40	35
14	McHaffie, Peter.	4-38-27 W 1.	S. L. 41	"	120,000	170,000		2,000			60
15	McHaffie, Peter.	4-38-27 W 1.	1576	"				250			
16	Oddiefason, Gestur.	1-21-2 E 1.	1559	"	55,000	35,000	20,000	6,000	1,500	4,500	36
17	Pratt, B. M.	16-33-28 W 1.	1385	Spruce and poplar.	25,000	75,000			600		50
18	Thompson, B. B.	9-24-6 E 1.	1421	Tamarack and spruce.	83,600	168,600	2,000	1,200	3,200	1,200	96
19	Thompson, J. H.	23-23-4 E 1.	1348	"	83,667	83,667			2,500		33
20	Tyler, D. C.	19-18-15 W 1.	1375	Spruce and poplar.	134,150	119,578	91,950	3,973	3,973		33
21	Walstrom, V.	26-18-17 W 1.	1452	Tamarack, spruce and jackpine.	100,000	100,000		2,600	2,600		33
					1,919,482	1,967,784	630,120	52,654	44,882	16,872	

PERMIT BERTHS ONLY.

1	Burrows, T. A.	Garland	827	Spruce.	153,200	153,200		9,400	2,850	9,400	53
	Caverly, Jefferson	Bowman River,	965	"	1,577,911	2,055,141	1,503,590	40,027	34,577	5,450	45
3	Matthews, B. J.	27-38-28 W 1.	1090	"	120,000	40,000	80,000	11,000	2,500	11,500	48
4	McArthur, J. D.	Siglines	872	Tamarack, spruce and poplar	23,316	23,316					
5	McArthur, J. D.	Lac du Bonnet.	793	"	103,418		103,418		3,000		34
6	Robinson, Wm.	Black River	830	Tamarack and spruce.	771,374	771,374			23,140		33
7	Wells, A. L., assigned to J. A. Dart, Oct. 7, 1908	Big Grindstone Pt.	1044	Spruce.	620,580				14,475		42
					3,369,829	3,663,911	1,687,038	60,427	80,542	26,350	

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SCHEDULE C.—Showing the Mills (including the Portable Mills) operating within the Winnipeg Agency, &c.—*Concluded*.
PORTABLE SAW-MILL BERTHS ONLY.—*Concluded*.

No.	Mill Owner.	Location of Mill.	Berth No.	Species of Timber Cut.	RAILWAY TIES.			Average price of Lumber per M. ft.	No. of Berths made.	Date of last Return.	Remarks.
					Manu- factured	Sold.	On hand.				
1	Blackburn & Somerville	27-32-30 W 1	1508	Tamarack and spruce.	.....	.....	.....	\$ 16 00	4	Mar. 31, '09	
2	Butson, W. F.	27-39-25 W 1	1519	Spruce.	.....	.....	.....	11 62	4	" 31, '09	
3	Fulton, Thos.	Eotamami	1345	"	.....	.....	.....	20 00	4	" 31, '09	
4	Garnache, Pierre.	9-23-2 W 1	1631	"	.....	.....	.....	13 00	3	" 31, '09	
5	Hall, Erick	24-13-18 W 1	1483	"	.....	.....	.....	11 00	4	" 31, '09	
6	Heale, Walter G.	2-26-1 E 1	S. L. 42	"	.....	.....	.....	15 00	3	Dec. 26, '08	Cancelled, Dec. 26, 1908.
7	Helgeson, Johannes	30-23-4 E 1	1509	Tamarack and spruce.	.....	.....	.....	16 00	1	Mar. 31, '09	Cancelled, June 18, 1908.
8	Hodgins, Alex.	19-22-6 W 1	1573	Spruce.	.....	.....	.....	15 00	2	Mar. 31, '09	
9	Hodgins, Alex.	30-22-6 W 1	1550	"	.....	.....	.....	12 00	1	" 31, '09	
10	Kinnee, C. R.	27-28-23 W 1	1572	Tamarack, spruce, jack- pine and poplar.	.....	.....	.....	20 00	2	" 31, '09	
11	Loewen, C. T.	Steinbach	S. L. 61	Tamarack and spruce.	.....	.....	.....	10 00	1	" 31, '09	
12	Marchanski, J.	Net Point	1542	Spruce.	.....	.....	.....	15 00	3	" 31, '09	
13	McDougall, Alex.	19-23-11 W 1	1508	"	.....	.....	.....	15 00	3	Dec. 31, '08	Cancelled, Oct. 21, 1908.
14	McHaffie, Peter.	4-38-27 W 1	S. L. 41	"	.....	.....	.....	15 00	1	Mar. 31, '09	
15	McHaffie, Peter.	4-38-27 W 1	1576	"	.....	.....	.....	15 00	1	" 31, '09	
16	Oddlefsson, Gestur	1-21-2 E 1	1559	"	.....	.....	.....	15 00	1	June 30, '08	Cancelled, Aug. 25, 1908.
17	Pratt, B. M.	16-33-28 W 1	1385	Spruce and poplar.	.....	.....	.....	14 33	4	Mar. 31, '09	
18	Thompson, B. B.	9-24-6 E 1	1421	Tamarack and spruce.	.....	.....	.....	15 00	1	June 30, '08	Cancelled, July 13, 1908.
19	Thompson, J. H.	23-23-4 E 1	1348	"	.....	.....	.....	12 00	4	Mar. 31, '09	
20	Tyler, D. C.	19-18-15 W 1	1375	Spruce and poplar.	.....	.....	.....	13 33	4	" 31, '09	
21	Walstrom, V.	28-18-17 W 1	1482	Tamarack, spruce and jackpine.	.....	.....	.....	
PERMIT BERTHS ONLY.— <i>Concluded</i> .											
1	Burrows, T. A.	Garland	827	Spruce.	5,372	.....	5,372	12 00	4	Mar. 31, '09	
2	Caverly, Jefferson	Bowman River, 27-38-28 W 1	966	"	.....	.....	.....	15 00	4	" 31, '09	
3	Mathews, B. J.	Sighu	1099	"	.....	.....	.....	12 50	4	" 31, '09	
4	McArthur, J. D.	Lac du Bonnet	872	Tamarack, spruce and poplar	2,833	2,833	.....	15 00	4	" 31, '09	All cut by the city of Winnipeg, and Winnipeg Electric Railway Co.
5	McArthur, J. D.	"	293	"	.....	.....	.....	13 00	4	" 31, '09	
6	Robinson, Wm.	Black River	850	Tamarack and spruce.	.....	.....	.....	12 00	5	" 31, '09	
7	Wells, A. L., assigned to J. A. Dart, Oct. 7, 1908.	Big Grindston- Pt.	1044	Spruce.	8,205	2,833	5,372				
											E. F. STEPHENSON, Crown Timber Agent.

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SCHEDULE D.—GENERAL Office Return of the Crown Timber Agency, Winnipeg, for Fiscal Year ending March 31, 1909.

Particulars.	Number, &c.	As compared with previous year.	As compared with previous year.	Remarks.
		Increase.	Decrease.	
Letters received.....	24,382	5,048	} Includes Land Department; no separate record kept.
Letters written.....	22,130	2,978	.....
Permits subject to dues issued.....	305	.....	426
Free permits issued.....	684	.....	18
Seizures made.....	63	14	Permit berths not included in return previous to this year.
Mill returns received and verified.....	584	17	.....
Mills operating under government license.	36	1	.....
" " permits.	22	.....	.....
Quantity of lumber manufactured, under license.....	46,171,963	.....	35,405,367
Quantity of lumber sold, under license....	61,694,391	8,209,030	.....
" on hand ".....	43,518,001	.....	18,002,621
Average price at which lumber sold. Per M.	814.55	\$3.45	
Hay permits issued.....	600	138	

E. F. STEPHENSON,
Crown Timber Agent.

No. 24.

REPORT OF THE CROWN TIMBER AGENT AT CALGARY.

DEPARTMENT OF THE INTERIOR,
DOMINION LANDS AND CROWN TIMBER OFFICE,
CALGARY, ALBERTA, May 14, 1909.

The Commissioner of Dominion Lands,
Ottawa.

SIR,—I have the honour to inclose herewith the following statements for the twelve months ending March 31, 1909:—

Schedule 'A,' statement on account of Crown timber, grazing and hay lands. The amount collected at the office and at headquarters on account of this agency is \$24,615.81.

Schedule 'B,' showing the saw-mills within the Crown timber agency in operation under government license.

Schedule 'C,' showing the portable saw-mills operated under permit.

Schedule 'D,' general office work.

Schedule 'F,' showing quantity of timber cut under settlers' permits, &c.

You will observe that the quantity manufactured from licensed berths during the twelve months, amounted to 13,730,588 ft. B.M., quantity sold 11,211,737 ft. B.M.; manufactured by portable mills under permits, 7,210,191 ft. B.M.; quantity sold, 5,476,799 ft.; total quantity on hand 13,611,610 ft.

In addition to the 20,940,779 ft board measure manufactured as above mentioned, there has probably been about 100,000,000 ft. brought into this province from the province of British Columbia, but apparently nothing has been imported from the United States.

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The log crop according to an estimate made by the chief forest ranger, Mr. Margach, amounted to 20,000,000 ft., which in addition to the 13,000,000 ft. estimated as being the quantity left over from the cut of 1907 and 1908, will make 33,000,000 ft., which the mill-owners will require to manufacture into lumber during this season.

As requested by you in your letter of instructions, I beg leave to say that \$14.91 per thousand feet, is the average price at which the lumber sold throughout this district, during the last year.

GRAZING.

The area under lease for grazing purposes in the Calgary land district is approximately 410,000 acres, 166 leases being still in force.

In regard to this industry, I may say that the day of the large rancher is practically a thing of the past, and the man with the small band of cattle is taking his place. I would recommend, however, that the demands of the stockmen should receive every consideration, as this is no doubt a great stock country, and in my opinion it would be good policy to encourage stock growing as much as possible.

It is a well known fact among those who know anything about this country that there are waste places suitable only for ranching purposes.

It has been demonstrated that some settlers will endeavour to farm almost anywhere, but it is not always in their own interests that they should be allowed to establish themselves on land that is unfit for agricultural purposes.

Special encouragement should be given to those who are desirous of providing plenty of food and shelter for their cattle, and are willing to embark in the business of feeding for the market. Such concerns will buy large quantities of feed from the farmer, and in the event of a crop failure, or partial failure at any time, we will have something to fall back upon. At the present time, I may say that it has been the salvation of farmers who are far away from the railway to have cattle sent to them by large cattle buyers, to feed for the winter, or otherwise there would be absolutely no market for their grains.

Where a stockman has already established himself and embarked in the business of preparing cattle for the market he will necessarily require a considerable area of land for grazing, and to grow feed upon to enable him to successfully carry on his business, and I am of the opinion that he should be allowed to acquire sufficient land for that purpose at a reasonable price. At the same time the rancher should undertake on his part in acquiring the land that it is not for speculative purposes, and that he intends continuing the business in which he is engaged.

Your obedient servant,

J. R. SUTHERLAND,
Crown Timber Agent.

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SCHEDULE A.—STATEMENT of Receipts from Crown Timber Agency at Calgary for Fiscal Year ending March 31, 1909.

Month.	Bonus under License.	Ground Rent under License.	Royalty Due under License.	Permit Fees, Dues and Rental.	Seizures.	Grazing Lands Rentals.	Hay Permits, Fees and Dues.	Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1908.								
April		313 01	953 17	62 21		145 50	428 50	1,902 39
May		689 40	192 34	216 03		836 83	154 00	2,088 60
June		119 82		10 82		12 80	164 05	397 49
July		64 28	774 66	67 32		408 85	275 40	1,890 71
August		17 60	447 74	191 29	4 74	1,016 86	44 20	1,722 43
September		26		329 28	9 00	8 85	10 50	357 89
October			456 27	120 13		219 76		796 16
November		68 16	1,074 50	74 87	598 25	663 58	7 50	2,486 86
December			552 36	549 12	150 00	791 94	8 00	2,451 42
1909.								
January			825 55	490 89		61 27		1,377 71
February			95 13	252 91	200 00	344 07		892 11
March			301 55	248 70		257 22		807 47
Totals.		1,272 53	5,673 27	2,613 77	961 99	4,767 53	1,092 15	16,381 24
Collected at head office.		7,992 10	59 47	183 00				8,234 57
		9,264 63	5,732 74	2,796 77				24,615 81

NOTE.—Bonuses are collected at head office.

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SCHEDULE C.—SHOWING the Mills (including the Portable Mills) operating within the

Mill Owner.	Location of Mill.	Berth No.	Species of Timber Cut.	LUMBER.		
				Manu- factured.	Sold.	On Hand.
				Ft., B. M.	Ft., B. M.	Ft., B. M.
Thomas Quigley	Cochrane.	1307	Spruce, fir, pine.	249,000	262,000	.....
Wm. J. McIntyre	Didsbury	1344	" . . . . .	.....	16,000	.....
David Black.	On Berth.	1326	"	103,675	550,000	.....
W. W. Channell.	"	1304	" and pine. . . . .	.....	.....	.....
Joseph Fisher.	Millarville.	1358	"	49,000	40,000	35,000
J. R. Shell.	On Berth.	1380	" and pine.	271,865	323,183	.....
Samuel J. Templeton.	Beaver Creek.	1409	" and fir. . . . .	.....	.....	20,529
Arthur G. Spooner.	On Berth.	1406	"	213,000	78,000	189,000
Great West Lumber Co.	Red Deer.	1472	Cypress pine. . . . .	.....	.....	.....
Charles Stobbs.	On Berth.	1396	Spruce and fir.	41,800	108,280	39,582
West Can. Collieries.	Lille.	1432	" and pine. . . . .	.....	100,000	.....
Francis Du Rocher.	On Berth.	1520	"	27,744	39,744	.....
Archibald Lake.	"	1506	" and fir.	374,055	354,055	20,000
W. H. Gibson.	"	1521	" and pine.	1,801,516	1,489,516	312,000
Lineham Lumber Co.	High River.	1428	Pine	2,196,412	1,127,684	1,068,728
"	"	1433	"	1,240,688	533,881	706,807
Joseph Peters.	Cypress Hills.	1553	Spruce	44,000	12,000	32,000
P. W. Halvarson.	Blk. Diamond.	1427	"	597,436	422,436	175,000
				7,210,191	5,456,779	2,598,646
Inter. Coal and Coke Co	Coleman.	1529	Pine and mining props.	Lin. Ft. 56,810	Lin. Ft. 56,810	.....
E. G. Hazell.	Crowsnest.	1510	Dry cord wood	Cords. 350	Cords. 350	.....
Inter. Coal and Coke Co.	Coleman.	36A	Dry mining props.	Lin. Ft. 683,236	Lin. Ft. 683,236	.....

SESSIONAL PAPER No. 25

Calgary Agency under Government Permits, for the Fiscal Year ending March 31, 1909.

LOG COUNT.			Average per Log.	RAILWAY TIES.		Average Price of Lumber per M. ft.	No. of Returns made.	Date of Last Return.	REMARKS.
Logs Cut.	Logs Manufactured.	Logs on Hand.		Manufactured.	Sold.				
			Ft. B. M.			\$ cts.			
	3,350		74' 32			13 00	4	Mar. 31, '09	
						14 00	1	June 30, '08	Berth cancelled.
	3,000		34' 33			14 00	1	Sept. 30, '08	" "
		1,190					3	Mar. 31, '09	
	965		50' 77			12 50	4	" 31, '09	
	6,176		44' 00				3	Dec. 31, '08	" "
2,600	4,500	2,900	47' 50			12 25	4	Mar. 31, '09	
865		5,281					4	" 31, '09	Permit for G.T.P.
662	500	662	83' 60			10 00	2	Dec. 31, '08	
							3	" 31, '08	Products used in
448	503		55' 15			10 00	2	Sept. 30, '08	their mine.
18,513	18,013	500	20' 70			12 02	4	Mar. 31, '09	
27,547	25,567	1,980	70' 40			11 00	4	" 31, '09	
137,359	75,216	62,143	29' 20	68,675	68,675	13 93	3	" 31, '09	Permit for G.T.P.
47,414	47,810		25' 90	23,832	23,832	13 82	3	" 31, '09	" "
12,370	12,370		48' 21			14 00	5	Mar. 31, '09	
247,778	197,970	74,656	36' 42	92,507	92,507	12 54' 33	51		
									Used in mine.
									Used burning lime.
									Taken from timber less than 10 ins. in diameter, used in mines.

J. R. SUTHERLAND,
Crown Timber Agent.

9-10 EDWARD VII., A. 1910

**SCHEDULE D.—GENERAL Office Return of the Crown Timber Agency, Calgary for
Fiscal Year ending March 31, 1909.**

Particulars.	Number, &c.	As compared with previous year, increase.	As compared with previous year, decrease.	Remarks.
Letters received.....	34,740		61	Including Dominion lands.
Letters written.....	34,196	5,032		" "
Permits subject to dues issued.....	16		27	
Free permits issued.....	620		231	
Seizures made.....	10		5	
Mill returns received and verified.....	115	15		
Mills operating under government license.....	16		1	
Mills operating under government permits.....	20	8		
Quantity of lumber manufactured, under license.....	13,730,588		7,791,408	
Quantity of lumber sold, under license.....	11,211,737		5,531,508	
Quantity of lumber on hand, under license.....	11,012,964	2,647,049		
Average price at which lumber sold.....	\$14.91		\$7.38	
Hay permits issued.....	195	24		

J. R. SUTHERLAND,
Crown Timber Agent.

**SCHEDULE E.—STATEMENT showing the Quantity of Timber cut under Permit at the
Calgary Agency.**

Month.	Lin. ft., B. logs.	Feet B.M. Lumber.	Roof poles.	Fence rails.	Fence posts.	Dry wood.
1908.						
April.....	21,950	352,972	13,955	73,575	15,840	1,093
May.....	12,985	283,724	14,510	79,191	17,992	1,156
June.....	17,800	101,327	12,030	58,128	13,865	880
July.....	13,730	57,919	9,290	47,400	9,976	719
August.....	3,000	97,284	4,656	23,800	5,198	376
September.....	9,028	99,150	5,413	29,290	6,672	431
October.....	6,000	197,416	9,543	49,400	12,080	746
November.....	21,739	323,367	16,001	86,820	20,541	1,335
December.....	10,140	1,082,493	39,170	210,075	47,200	3,006
1909.						
January.....	33,285	725,903	36,002	204,487	42,719	2,999
February.....	18,000	1,687,383	27,128	159,170	36,710	2,326
March.....	14,750	433,652	19,760	103,365	22,850	1,549
Total.....	182,409	5,442,620	207,458	1,124,701	251,643	16,616

J. R. SUTHERLAND,
Crown Timber Agent.

No. 25.

REPORT OF THE CROWN TIMBER AGENT AT EDMONTON.

DEPARTMENT OF THE INTERIOR,

DOMINION LANDS AND CROWN TIMBER OFFICE,

EDMONTON, ALBERTA, April 2, 1909.

The Commissioner of Dominion Lands,
Ottawa, Ont.

SIR,—I have the honour to report with respect to the timber operations within this agency for the year ending March 31, 1909.

The total operations for the year show some increase over those of last year, the increase in the amount cut under settlers' permits being very marked. The operations of the larger concerns, however, show a decrease, the supply of lumber being more than equal to the demand. Some of the larger mill owners suffered another serious loss in logs by the sudden rise of the Saskatchewan river, and the absence of adequate means to protect them under such circumstances. The past winter was quite favourable for lumbering operations generally. The average price at which lumber was sold would appear to be \$13.70 as against \$15 for the preceding year.

The following is the cut for the year :—

- (a) By licensed berth owners. 6,679,117 ft. B.M.
 (b) By permit berth owners. 6,457,236 "
 (c) By portable mills under settlers' permits .. 11,780,672 "

Your obedient servant,

K. W. MACKENZIE,

Crown Timber Agent.

SCHEDULE A.—STATEMENT of Receipts from Crown Timber Agency at Edmonton for
Fiscal Year ending March 31, 1909.

Month.	Ground Rent under License.	Royalty Dues under License.	Permit Fees, Dues and Rental.	Seizures.	Grazing Lands Rentals.	Hay Permits, Fees and Dues.	Totals.
1908.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
April	45 10	184 14	413 20	160 70	.....	.....	801 89
May.....	217 50	353 29	354 65	252 32	.....	333 10	1,510 86
June.....	303 83	60	207 19	40 45	12 80	203 10	767 97
July.....	408 78	882 46	186 86	.....	.....	72 60	1,550 70
August.....	20 69	509 36	100 99	104 75	.....	11 25	747 04
September.....	4 48	.....	49 45	38 96	.....	6 50	99 39
October.....	89 45	1,691 33	150 69	71 32	.....	.....	2,002 70
November.....	17 12	49 58	408 83	82 18	.....	20	559 16
December.....	.....	29 95	473 10	31 05	.....	2 40	536 50
1909.							
January ..	81 24	1,307 25	3,498 38	304 25	.....	.....	5,191 12
February ..	.....	.....	343 69	443 87	.....	.....	827 56
March .....	.....	.....	660 92	265 66	.....	1 00	927 58
Totals.....	1,188 19 6,457 79	5,007 96	6,887 86 100 00	1,795 51	12 80	630 15	15,522 47 6,557 79
							22,080 26

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SCHEDULE C.—Showing the Mills (including the Portable Mills) operating within the

Mill Owner.	Location of Mill.	Berth No.	Species of Timber Cut.	LUMBER.		
				Manufactured Ft. B. M.	Sold Ft. B. M.	On Hand Ft. B. M.
Isaac Gagnon.....	Athabaska Ldg..	1,298	Spruce....	200,000	140,000	126,000
D. R. Fraser & Co., and John Walter.....	Edmonton and Strathcona....	1,306	.....	662,979	1,890,268	662,972
Henry Meyer.....	Berth.....	1,308	.....	238,913	150,433	263,960
J. A. L. McDougall.....	".....	1,309	.....	.....	13,620	56,380
H. L. McInnis.....	Pickardville....	1,329	.....	739,471	156,637	532,834
F. C. Papineau.....	Berth.....	1,337	.....	42,700	171,720	6,000
A. D. McDiarmid.....	.....	1,347	.....	.....	.....	241,848
R. A. McDonald.....	.....	1,357	.....	.....	.....	135,420
J. E. Gibeault.....	.....	1,381	.....	35,272	64,214	25,635
R. T. Telford.....	.....	1,386	.....	.....	122,000	146,000
White & Short.....	.....	1,505	.....	230,000	26,000	204,000
E. J. Dowsett.....	.....	1,515	.....	.....	.....	.....
Amedee Roy.....	.....	1,526	.....	.....	.....	64,244
Wm. Brunelle.....	Chicken Hill...	1,571	.....	33,650	1,500	32,150
John Walter.....	Edmonton and Strathcona....	Sp'l permit Order in Council. 10-7-'07, do.....	.....	.....	.....	.....
Edmonton Lumber Co.....	Edmonton.....	do.....	.....	3,449,466 339,048	1,461,013 257,658	2,243,274 81,390
John Walter.....	Edmonton and Strathcona....	S. L. No. 33	.....	5,971,499 485,737	4,455,663 747,776	4,822,107
Total.....				6,457,296	5,202,839	4,822,107

SESSIONAL PAPER No. 25

Edmonton Agency, under Government Permits, for the Fiscal Year ending March 31, '09.

LOG COUNT.			Average per Log Ft. R. M.	RAILWAY TIES.			Average Price of Lumber per M. ft.	No. of Returns made.	Date of Last Return.	REMARKS.
Logs Cut.	Logs Manufac- tured.	Logs on Hand.		Manufac- tured.	Sold.	On hand.				
...	3,000	700	66.6	...	...	...	\$ 20.00	4	Mar. 31, '09	
...	6,946	10,990	95.45	...	...	...	12.00	3	Dec. 31, '08	
...	2,590	...	92.24	...	...	...	10.00	4	Mar. 31, '09	
...	...	1,300	...	...	...	...	15.00	2	Sept. 30, '08	
...	14,498	...	51	...	...	...	15.00	4	Mar. 31, '09	LATH—
380	1,030	50	41.47	...	...	...	11.00	3	Dec. 31, '08	Manuf'd. 9,000
...	...	...	...	...	...	...	...	...	Apr. 17, '08	Sold. 9,000
...	592	2,628	59.5	...	...	...	12.90	3	Dec. 31, '08	On hand.
...	...	...	...	...	...	...	18.00	4	Mar. 31, '09	
4,200	4,600	...	50	...	...	...	16.00	4	Mar. 31, '09	SHINGLES—
389	300	89	...	...	...	...	...	2	Dec. 31, '08	Manuf'd. 96,250
...	...	40	...	...	...	...	...	...	Dec. 31, '07	Sold. 96,250
3,925	775	3,152	44.8	...	...	...	15.00	1	Mar. 31, '09	On hand.
...	...	...	...	...	...	...	...	...	...	SHINGLES—
...	86,288	96,687	39.19	26,798	26,798	...	16.00	4	Mar. 31, '09	Manuf'd. 199,750
7,434	6,585	849	51.4	...	...	...	12.00	3	Dec. 31, '08	Sold. 111,750
...	...	...	...	...	...	...	...	...	...	On hand. 88,000
16,328	127,204	116,485	...	26,798	26,798	...	...	...	...	M'd. Sold. On Hd.
2,956	9,223	...	51.5	...	...	...	...	...	...	9,000 9,000
...	...	...	...	...	...	...	...	...	...	Lath. 296,000
...	...	...	...	...	...	...	...	...	...	Shingles. 208,000 88,000
19,284	136,427	116,485	...	...	...	...	...	...	...

Certified correct.

K. W. MACKENZIE,
Crown Timber Agent.

9-10 EDWARD VII., A. 1910

SCHEDULE D.—GENERAL Office Return of the Crown Timber Agency, Edmonton, for
Fiscal Year ending March 31, 1909.

Particulars.	Number, &c.	As compared with previous year, increase.	As compared with previous year, decrease.
Letters received.....			
Letters written.....			
Permits subject to dues issued.....	366	272	
Free permits issued.....	1,478	1,600	
Seizures made.....	57	25	
Mill returns received and verified.....	292		98
Mills operating under government license.....	9		
" " government permits.....	16	6	
Quantity of lumber manufactured, under license.....	9,679,117		6,424,970
" " sold, ".....	7,112,690	5,938,534	
" " on hand, ".....	8,304,652	714,609	
Average price at which lumber sold.....	\$13.70		
Hay permits issued, Dominion lands.....	362	139	
" " school ".....	172		8

Correct correct.

K. W. MACKENZIE,
Crown Timber Agent.

No. 26.

REPORT OF THE CROWN TIMBER AGENT AT PRINCE ALBERT.

DEPARTMENT OF THE INTERIOR,
DOMINION LANDS AND CROWN TIMBER OFFICE,
PRINCE ALBERT, SASKATCHEWAN, April 14, 1909.

The Commissioner of Dominion Lands,
Ottawa, Ont.

SIR,—I have the honour to submit for your consideration the annual report of this office for the fiscal year ending March 31, 1909.

Attached hereto you will find the following detailed statements:—

Schedule 'A,' being a statement showing receipts from timber, grazing and hay on Dominion lands.

Schedule 'B,' being a statement showing saw-mills operating under license.

Schedule 'C,' being a statement showing saw-mills (including portable mills) operating under government permits.

Schedule 'D,' being a statement of the general office work performed.

These statements show a decided increase over the preceding year both in volume of work and revenue collected, the total receipts being \$38,229.53, as against \$28,333.74 for the previous twelve months.

The sales of lumber manufactured under license show an increase of 13,362,450 feet, while the average price per thousand feet shows \$17.54%, being a reduction of \$3.35% as compared with last year.

The average number of feet per log on licensed berths is shown as 53 $\frac{1}{4}$ ft, and on permit berths as 30 $\frac{3}{4}$.

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TIMBER PERMITS.

The number of permits issued is 1,357, an increase of 283 over the previous year, covering the following quantity of timber:—

Building logs (lineal feet).....	235,225
Lumber (feet B.M.).....	5,111,010
Shingles.....	52,000
Roof poles.....	185,882
Fence rails.....	302,408
Fence posts.....	899,012
Railway ties.....	30,901
Cordwood (cords).....	18,344

SEIZURES.

The number of seizures made during the year is 92, an increase of 46 over the previous year, covering the following quantity of timber:—

Lumber (feet B.M.).....	700,641
Fence posts.....	17,887
Railway ties.....	315
Cordwood (cords).....	976

In conclusion I would call your attention to the fact that the revenue as shown by this report does not include the total revenue derived from this district as a large number of licensed berths in the eastern portion of the district, on which operations are being carried on, report to the Winnipeg Crown Timber office and the revenues derived therefrom are included with that of the Winnipeg office.

Your obedient servant,

GEO. L. DEMPSTER,
Crown Timber Agent.

SCHEDULE A.—STATEMENT of Receipts from Crown Timber Agency at Prince Albert
for Fiscal Year ending March 31, 1909.

Month.	Ground rent under license.	Royalty dues under license.	Permit fees, dues and rental.	Seizures.	Hay permits fees and dues.	Totals.
1908.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
April.....	3,723 00	1,800 52	133 10	587 96	81 05	6,325 63
May.....	5 00	2,346 27	307 50	.....	74 20	2,732 97
June.....	.....	.....	59 35	47 80	101 00	208 15
July.....	.....	6,310 05	57 15	27 00	132 90	6,527 10
August.....	66 66	.....	4 50	2 05	31 50	104 71
September.....	250 00	391 33	50 05	10 50	.....	701 88
October.....	303 56	60 71	87 35	.....	2 10	453 72
November.....	.....	6,438 60	470 10	159 00	2 00	7,069 70
December.....	5 15	.....	651 20	35 95	2 50	694 80
1909.						
January.....	2 18	998 52	839 55	232 25	50	2,073 00
February.....	.....	8,996 75	1,072 85	341 82	50	10,411 92
March.....	.....	101 22	731 70	91 53	1 50	925 95
Totals.....	4,355 55	27,443 97	4,464 40	1,535 86	429 75	38,229 53
Collected at Head office	4,899 81	.....	100 00	.....	.....	4,999 81
						43,229 34

9-10 EDWARD VII., A. 1910

SCHEDULE C.—SHOWING the Mills (including the Portable Mills) operating within
ending

Mill Owner.	Location of Mill.	Berth No.	Species of Timber Cut.	LUMBER.		
				Manu- factured. Ft. B.M.	Sold. Ft. B.M.	On hand. Ft. B.M.
Crowston, Wm.....	9-42-16 W 2 ..	853	Spruce.....	114,606	114,606	.....
Garneau, Laurence.....	25-15-4 W 3...	1172	" .....	.....	.....	.....
Johnston and Brostrom.....	15-50-27 W 2..	876	"	8,000	.....	8,000
Carrot River Lumber Co.....	3-48-13 W 2...	1544	" .....	.....	.....	.....
Morrow, W. H.....	24-46-13 W 2..	757	"	86,938	.....	86,938
Meier, John F.....	18-50-14 W 2..	1408	" .....	.....	.....	.....
Sansfield and Adams.....	Halcro.....	1507	Spruce and poplar.	.....	.....	.....
Otte, Joseph.....	34-49-5 W 3...	1459	"	188,416	95,073	93,343
Ross Bros.....	Turtle Lake ..	1556	" .....	.....	.....	.....
Marcotte, Alcide.....	17-45-4 W 2...	1580	" .....	.....	.....	.....
Hendrikson and Johnson.....	.....	.....	.....	.....	.....	.....
				397,960	209,679	188,281

SESSIONAL PAPER No. 25

the Prince Albert Agency, under Government Permits, for the Fiscal Year March 31, 1909

LOG COUNT.			Average per Log. F. B. M.	RAILWAY TIES.			Average price of lumber per M. feet.	No of returns made.	Date of last return.	Remarks.
Logs Cut.	Logs manu- factured.	Logs on hand.		Manu- factured.	Sold.	On hand.				
8,097	5,097	3,000	22	Nil.	Nil.	Nil.	20 00	4	March 31, 1909.	
8,500		8,500						4	" " "	
*800										
2,300	296	2,804	27	8,673	8,673	Nil.		4	" " "	
4,283		4,283						1	Dec. 31, '08.	
1,738	1,738							1	March 31, 1909.	
										No returns
4,568	4,338	230	43				14 25	2	Sept. 30, 1908.	"
2,893		2,893						1	Dec. 31, 1908.	"
										"
										"
33,179	11,469	21,710	30 $\frac{2}{3}$	8,673	8,673	Nil.	17 12 $\frac{1}{2}$	17		
Less *800										

*Show amount on hand April 1, 1900.

Certified correct.

GEO. L. DEMPSTER,
Crown Timber Agent.

9-10 EDWARD VII., A. 1910

**SCHEDULE D.—GENERAL Office Return of the Crown Timber Agency, Prince Albert, for
Fiscal Year ending March 31, 1909.**

Particulars.	Number, &c.	As com- pared with previous year. Increase.	As com- pared with previous year. Decrease.
Letters received.....	15,442	2,063	
Letters written.....	13,081	3,113	
Permits subject to dues issued.....	370	283	
Free permits issued.....	987		
Seizures made.....	92	46	
Mill returns received and verified.....	78	16	
Mills operating under government license.....	6		
" " " permits.....	11	5	
Quantity of lumber manufactured under license ..	39,435,674		10,773,116
" " sold under license.....	48,734,960	13,362,450	
" " on hand under license	20,670,864		9,299,286
Average price at which lumber sold.....	\$17.54½		\$3.35½
Hay permits issued.....	176	106	

Certified Correct.

GEO. L. DEMPSTER,
Crown Timber Agent.

No. 27.

REPORT OF THE CROWN TIMBER AGENT AT NEW WESTMINSTER.

DEPARTMENT OF THE INTERIOR,
DOMINION LANDS AND CROWN TIMBER OFFICE,
NEW WESTMINSTER, B.C., May 14, 1909.

The Commissioner of Dominion Lands,
Ottawa, Ont.

SIR,—I have the honour to submit herewith my annual report covering the fiscal year ending the 31st of March last. In submitting this report I may say that it gives me pleasure to be able to state that the condition of the lumber business in this province has improved considerably during the past three months, and I consider that with careful management the business this year will be found very satisfactory indeed. The demand from the prairie provinces this spring is much in excess of last year, and as retail stocks on hand there are very much below the average it is expected that with the increase of population the demand will continue all through the summer months. Considerable railway extensions are also contemplated and these will add their quota to the demand.

Schedule 'A,' which is inclosed, shows the receipts of this office for the year, amounting to \$48,787.39, and the amount collected at head office on account of this agency, \$6,948.86. This is a considerable falling off from the previous year, when the receipts of this office were \$63,670.77, and is explained by the fact that during the latter part of last year the mills in the interior found themselves with large stocks of lumber on hand produced by high-priced labour and which it was impossible to dispose of even at the cost of production. Conditions are, however, improved, and the companies are now finding it much easier to meet their obligations.

SESSIONAL PAPER No. 25

Schedule 'B,' which is inclosed, shows saw-mills operating in the Railway Belt under government licenses, also shows the names of licensees operating on Dominion lands and who have no saw-mills in connection therewith. This schedule shows that approximately 53,923,157 feet board measure of saw logs was cut during the year. Out of this amount and what was on hand from the previous year, 54,621,244 feet board measure was sold, leaving 28,718,487 feet board measure on hand. The amount shown on hand is considerably less than last year, but does not represent the actual lumber on hand at the different mills for the reason that a number of the larger companies have been placed in a position to make returns on the log scale at the end of each quarter, and while the logs are shown as sold this is not the case, as in many instances it is months afterwards before they are manufactured into lumber and placed in the yard to be finally disposed of. This system of returns, however, has been found to be very much more satisfactory than the old method of returns on the mill product.

Schedule 'C,' which is also inclosed, gives information relating to the number of letters received and written, permits and seizures made, mill returns received, &c., and will go to show that while the revenue of the office during the year under review has been less than for the previous year the general work of the agency has increased to a very great extent.

Your obedient servant,

JAMES LEAMY,

Crown Timber Agent.

9-10 EDWARD VII., A. 1910

SCHEDULE A.—STATEMENT of Receipts from Crown Timber Agency at New Westminster for Fiscal Year ending March 31, 1909.

Month.	Ground Rent under License.	Royalty Dues under License.	Permit Fees Dues and Rental.	Seizures.	Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1908.					
April	7,729 88	1,023 87	162 75	.....	8,916 50
May	2,014 88	1,681 21	434 97	406 22	4,537 28
June	5,636 33	293 68	81 32	610 40	6,621 73
July	85 45	2,591 48	124 50	115 14	2,916 57
August	14 83	509 13	126 00	642 48	1,292 44
September		3,021 14	225 75	49 50	3,296 39
October		3,993 14	71 70	21 75	4,086 59
November		3,257 76	200 75	45 00	3,503 51
December	59 52	3,080 60	397 55	9 00	3,546 67
1909.					
January		3,911 86	572 50	186 78	4,671 14
February		841 30	458 98	19 65	1,319 93
March	813 69	2,665 80	241 50	357 45	4,078 64
Totals	16,354 78	26,870 97	3,098 27	2,463 37	48,787 39
Collected at Head Office...	6,948 86	.....	.....	.....	6,948 86
					55,736 25

9-10 EDWARD VII., A. 1910

SCHEDULE C.—GENERAL Office Return of the Crown Timber Agency, New Westminster, B.C., for Fiscal Year ending March 31, 1909.

Particulars.	Number, &c.	As compared with previous year. Increase.	As compared with previous year. Decrease.
Letters received	3,867	1,682	
Letters written	4,850	1,143	
Permits subject to dues issued	72	30	
Free permits issued	10	9	
Seizures made	18	6	
Mill returns received and verified	1,465		
Mills operating under Government license	16		
" " " Government permits	Nil		
Quantity of lumber manufactured, under license	53,923,137		20,168,523
" " " sold, " "	54,621,244	3,479,851	
" " " on hand, " "	28,718,487		2,024,778
Average price at which lumber sold	814 20		
Hay permits issued	Nil		

No. 28.

REPORT OF THE INSPECTOR OF RANCHES.

DEPARTMENT OF THE INTERIOR,

DOMINION LANDS AND CROWN TIMBER OFFICE,

CALGARY, ALBERTA, April 13, 1909.

The Commissioner of Dominion Lands,
Ottawa, Ont.

SIR,—I have the honour to submit herewith my report of the transactions of the office of the Inspector of Ranches for the fiscal year ending March 31, 1909.

During the year 1,740 inspections have been made and in the discharge of these duties 11,692 miles have been travelled by rail and 5,796 miles were covered by wagon. This is the mileage of Mr. Robertson and myself.

In comparing the number of inspections for the past year with the year previous it will be observed that the number is not as great, but this is due to the following reasons: During the months of April, May and June Mr. Robertson, of this office, was engaged in seed grain distribution, and I myself was engaged in the same work for April and a good part of May. When the pre-emption rush in the month of September was on, Mr. Robertson spent a greater part of the month giving them assistance in the land office here. Then during the months of December, January and February when there was no homestead inspector, Mr. Robertson was acting inspector.

Inclosed for your information is a comparative statement by years of stock shipped and handled from the ranching districts almost entirely. It will be noticed that the stock industry is on the increase and that a considerable advance has been made since the hard winter of 1906-7, when the loss to stock was extremely heavy. It will also be observed that the value of stock for this past year runs into the millions.

Cattle and all stock have wintered well on the range and up to this date there have been no losses because of bad weather conditions. However, during the month of October last the sheep men in the Walsh and Maple Creek districts experienced considerable loss because of the heavy fall of wet snow, for which they were unprepared, as their flocks were on the summer ranges away from the shelter provided at headquarters.

Your obedient servant,

ALBERT HELMER,

Inspector of Ranches.

SESSIONAL PAPER No. 25

STATEMENT showing Stock Shipments.

MAIN LINE.—MOBLEY TO MOOSEJAW.

Export cattle	32,800
Other cattle.....	13,793
Horses	9,183
Sheep.....	29,278

CROWNSHED.—DUNMORE TO PINCHER. ALBERTA
RAILWAY AND IRRIGATION CO.

Export cattle.....	9,471
Other cattle.....	11,405
Horses	2,001
Sheep	8,665

TOTAL FOR 1908.

Export cattle.....	48,290
Other cattle.....	30,516
Horses.....	12,450
Sheep.....	38,605

MACLEOD BRANCH.

Export cattle.....	4,763
Other cattle.....	4,141
Horses	1,108
Sheep.....	387

EDMONTON BRANCH.

Export cattle.....	1,105
Other cattle.....	1,580
Horses.....	158
Sheep.....	285

CATTLE FOR YEAR 1908.

Total export.....	61,810
To Winnipeg.....	17,370
To Coast.....	9,384
To Butchers.....	10,428
Total.....	98,992

COMPARATIVE STATEMENT FOR 1905, 1906, 1907 AND 1908.

1905.

Horses.....	12,882	Carloads.....	644
Cattle.....	84,405	"	4,636
Sheep	40,810	"	204
Export cattle.....	49,991	"	2,940

1907.

Horses.....	11,382	Carloads.....	566
Cattle.....	80,043	"	4,447
Sheep.....	28,573	"	122
Export cattle.....	42,960	"	2,527

1907.

Canadian cattle to Chicago:—
Via C. P. R. 249 cars,
Via G. N. R. 190 cars.

13,636 horses represent \$1,636,320.00 at \$120.00 each.
37,182 cattle (butcher's) \$1,102,916.00 at \$ 38.00 each.
40,733 sheep " \$ 244,518.00 at \$ 6.00 each.
61,810 export cattle " \$3,090,500.00 at \$ 50.00 each.

1906.

Horses.....	19,549	Carloads.....	977
Cattle.....	114,651	"	6,370
Sheep.....	57,024	"	285
Export cattle	74,733	"	4,383

1908.

Horses.....	13,636	Carloads.....	680
Cattle.....	98,992	"	5,748
Sheep	40,753	"	650
Export cattle.....	61,810	"	3,628

1908.

Canadian cattle to Chicago:—
Via C. P. R. 154 cars,
Via G. N. R. 61 cars.

9-10 EDWARD VII., A. 1910

SUMMARY of Work performed by A. Helmer, Inspector of Ranches, and Stanley M. Robertson, Assistant to Inspector of Ranches, from April 1, 1908, to March 31, 1909.

Land inspections made	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
<i>Albert Helmer, Inspector of Ranches.</i>	Seed grain.	188	83	503	72	33	Forest reserve.	165	12	24	3	200
Miles driven.....	.....	485	215	327	574	315	221	460	195	173	200	304
Miles by rail. . . .	.....	2,022	835	598	740	672	300	998	866	212	300	747
<i>Stanley M. Robertson asst. to Inspector of Ranches.</i>	Seed grain.	Seed grain.	Seed grain part.	63	74	173	71	130	9	28	nil. With Hmsd Insp.	69
Miles driven.. . . .	.....	.....	25	373	240	415	101	327	155	300	nil.	391
Miles by rail.....	.....	.....	100	212	362	882	384	400	308	58	nil.	696

No. 29.

REPORT OF THE ACCOUNTANT.

DEPARTMENT OF THE INTERIOR,

ACCOUNTS BRANCH,

OTTAWA, June 10, 1909.

W. W. CORY, Esq.,

Deputy Minister of the Interior,
Ottawa.

SIR,—I have the honour to submit herewith statements of revenue collected from various sources during the fiscal year ended March 31, 1909, as follows :—

A. Dominion lands, including Yukon Territory.	\$2,277,678 09
B. Ordnance lands.	205,749 96
C. School lands.	687,422 74
D. Registration fees.	1,352 13
E. Fines and forfeitures, N.W.T.	241 00
F. Fines under Immigration Act.	40 00
G. Casual revenue.	26,224 29
H. Seed grain repayments.	53,590 86
	<u>\$3,252,299 07</u>

A statement of revenue on account of Dominion lands (Marked I.) shows the receipts monthly, classified under subheads; statement (Marked J) shows a comparison between the receipts on account of Dominion lands for the fiscal year ended March 31, 1909, as compared with the revenue of the previous twelve months.

I would draw attention to the total gross receipts on account of Dominion lands, which are the largest in the history of the department. I might also point out that the gross receipts from all sources for the fiscal year 1908-9 amount to \$3,252,299.07, or almost as much as was received during the ten years from 1886-87 to 1895-96, inclusive.

Your obedient servant,

CHAS. H. BEDDOE,
Superintending Accountant.

SESSIONAL PAPER No. 25

A.—DOMINION Lands Revenue (cash and scrip) for the fiscal year ended March 31, 1909.

Agencies.	Cash.	Scrip.	Total Cash and Scrip.
YUKON TERRITORY.	\$ cts.	\$ cts.	\$ cts.
Sales of lands	7,495 21	480 00	7,975 21
Rentals of lands	9,827 86		9,827 86
Map sales, office fees, &c.	41 00		41 00
Timber dues	26,482 64		26,482 64
Hay permits	140 50		140 50
Coal lands	371 73		371 73
Mining fees	88,838 50		88,838 50
Export tax on gold	81,585 07		81,585 07
Free certificates for export of gold	166 00		166 00
Hydraulic leases	4,488 81		4,488 81
Dredging leases	10,272 07		10,272 07
Homestead fees	80 00		80 00
Improvements	135 00		135 00
Rent of water power	250 00		250 00
Suspense account	2,350 85		2,350 85
Refunds of refunds	36 00		36 00
	232,561 24	480 00	233,041 24
DOMINION LANDS AGENCIES.			
Battleford	96,793 72	660 00	97,453 72
Brandon	23,876 14	2,249 43	26,125 57
Calgary	139,199 90	2,800 00	141,999 90
Dauphin	25,664 08		25,664 08
Edmonton	111,074 70		111,074 70
Estevan	38,508 26	424 60	38,932 86
Humboldt	41,738 44	295 74	42,034 18
Kamloops	10,109 60	1,554 89	11,664 49
Lethbridge	598,740 75	80 00	598,820 75
Moosejaw	242,037 22	6,794 25	248,831 47
New Westminster	2,742 43	80 00	2,822 43
Prince Albert	34,526 55	880 00	35,406 55
Red Deer	42,873 88		42,873 88
Regina	76,882 25		76,882 25
Winnipeg	30,754 97	3,837 36	34,592 33
Yorkton	40,175 07		40,175 07
	1,555,697 96	19,657 27	1,575,354 23
CROWN TIMBER AGENCIES.			
Battleford	364 45		364 45
Brandon	480 60		480 60
Calgary	18,756 13		18,756 13
Dauphin	9,284 69		9,284 69
Edmonton	21,437 31		21,437 31
Estevan	105 50		105 50
Humboldt	238 00		238 00
Lethbridge	247 90		247 90
Moosejaw	209 72		209 72
New Westminster	55,736 25		55,736 25
Prince Albert	42,799 59		42,799 59
Red Deer	375 51		375 51
Regina	87 25		87 25
Winnipeg	92,842 28		92,842 28
Yorkton	389 70		389 70
	243,354 88		243,354 88
Carried forward	2,031,614 08	20,136 27	2,051,750 35

9-10 EDWARD VII., A. 1910

A.—DOMINION Lands Revenue (cash and scrip) for the fiscal year ended March 31, 1909.—*Continued.*

Agencies.	Cash.	Scrip.	Total Cash and Scrip.
	\$ cts.	\$ cts.	\$ cts.
Brought forward.....	2,031,614 08	20,136 27	2,051,750 35
MISCELLANEOUS.			
Rocky Mountains Park.....	31,321 20		31,321 20
Survey fees.....	42,388 31		42,388 31
Irrigation fees.....	367 00		367 00
Patent fees.....	991 50		991 50
Map sales, office fees, &c.....	5,352 20		5,352 22
Fees re Board of Examiners, D.L.S.....	1,040 00		1,040 00
Homestead fees.....	20 00		20 00
Sales of lands.....	224 62		224 62
Rentals of lands.....	10 00		10 00
Mining fees.....	3,799 10		3,799 10
Grazing lands.....	53,312 79	3,257 84	56,570 63
Hay permits.....	5,781 30		5,781 30
Coal lands.....	55,164 16		55,164 16
Dredging leases.....	916 27		916 27
Stone quarries.....	906 38		906 38
Rent of water power.....	292 28		292 28
Suspense account.....	1,982 31		1,982 31
Refunds of refunds.....	18,069 26		18,069 26
Miscellaneous.....	731 22		731 22
	222,669 90	3,257 84	225,927 74
	2,254,283 98	23,394 11	2,277,678 09
Refunds.....	101,029 37	1,434 41	102,463 78
	2,153,254 61	21,959 70	2,175,214 31

CHAS. H. BEDDOE,
*Superintending Accountant.*DEPARTMENT OF THE INTERIOR,
ACCOUNTS BRANCH,
OTTAWA, June 10, 1909.

B.—STATEMENT of Ordnance Lands Revenue for the Fiscal Year ended March 31, 1909.

1908—

April.....	\$ 280 50
May.....	713 90
June.....	726 75
July.....	960 41
August.....	946 60
September.....	402 45
October.....	478 72
November.....	130 00
December.....	249 88

1909—

January.....	409 85
February.....	200,202 70
March.....	248 20

Total.....\$205,749 96

CHAS. H. BEDDOE,
*Superintending Accountant.*DEPARTMENT OF THE INTERIOR,
ACCOUNTS BRANCH,
OTTAWA, June 19, 1909.

SESSIONAL PAPER No. 25

C.—STATEMENT of Receipts on Account of School Lands for the Fiscal Year ended March 31, 1909.

Month.	Manitoba School Lands.	Saskatche- wan School Lands.	Alberta School Lands.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1908.				
April	5,007 97	12,915 78	4,170 34	22,094 09
May	9,025 47	5,657 40	2,488 31	17,171 18
June	30,590 44	7,595 43	3,882 58	42,068 45
July	20,356 92	4,007 82	5,187 47	29,552 21
August	4,008 29	3,809 85	5,062 82	12,874 96
September	2,522 26	2,239 70	3,577 04	8,339 00
October	43,667 04	21,778 29	14,053 59	79,498 92
November	131,517 80	50,326 39	54,523 47	236,367 76
December	62,516 09	25,062 57	23,999 82	111,578 48
1909.				
January	28,250 44	15,161 07	12,429 97	55,841 48
February	12,574 01	10,032 90	8,871 57	31,478 48
March	16,057 36	14,465 76	10,094 23	40,557 35
	366,094 09	172,986 96	148,341 31	687,422 36
Add refund cheque No. 272, account sales (princ.) returned by Canadian Northern Railway not used	38			38
	366,094 47	172,986 96	148,341 31	687,422 74

CHAS. H. BEDDOE,
Superintending Accountant.

DEPARTMENT OF THE INTERIOR,
ACCOUNTS BRANCH,
OTTAWA, June 10, 1909.

D.—STATEMENT of Registration Fees in the Yukon Territory for the Fiscal Year ended March 31, 1909.

Month.	District.	Registrar.	Amount.
			\$ cts.
1908.			
April	Yukon Territory	Nap Laliberte	136 28
May	"	"	62 75
June	"	"	89 50
July	"	"	106 45
August	"	"	132 10
September	"	"	180 90
October	"	"	138 90
November	"	"	200 50
December	"	"	113 10
1909.			
January	"	"	71 10
February	"	"	32 25
March	"	"	88 30
			1,352 13

CHAS. H. BEDDOE,
Superintending Accountant.

DEPARTMENT OF THE INTERIOR,
ACCOUNTS BRANCH,
OTTAWA, June 10, 1909.
25—i—8½

9-10 EDWARD VII., A. 1910

E.—STATEMENT of Fines and Forfeitures in the Northwest Territories for the Fiscal Year ended March 31, 1909.

Month.	From whom received.	Amount.
1908.		\$ cts.
August.	David Harris.	10 00
September.	Henry Hunter.	25 00
October.	J. Whitehead, J. Pedersen, A. L. South, H. Benbow.	81 00
1909.		
January.	Hudson's Bay Co., R. Massey, Thos. Wallace, W. Connell.	100 00
February.	Horace Halcrow.	25 00
		241 00

CHAS. H. BEDDOE,
*Superintending Accountant.*DEPARTMENT OF THE INTERIOR,
ACCOUNTS BRANCH,
OTTAWA, June 10, 1909.

F.—STATEMENT of Fines collected under the Immigration Act for the Fiscal Year ended March 31, 1909.

Month.	From whom received.	Amount.
1909.		\$ cts.
March.	Wm. Roberts, Thos. Piking.	40 00

CHAS. H. BEDDOE,
*Superintending Accountant.*DEPARTMENT OF THE INTERIOR,
ACCOUNTS BRANCH,
OTTAWA, June 10, 1909.

G.—STATEMENT of Casual Revenue for the Fiscal Year ended March 31, 1909.

Name.	Particulars.	Amount.
		\$ cts.
J. W. Greenway.	Refund acct. travelling expenses.	158 30
J. M. Bender.	" salary cheque for June, '06	25 00
H. N. Topley.	" travelling expenses.	1 00
D. D. Penner.	" redemption of lien.	19 00
B. Neville.	Proceeds of sale of tents	80 00
R. G. Wilkinson.	" "	10 00
H. H. Rowatt.	Refund acct. travelling expenses.	228 05
L. P. O. Noel.	" contingencies, January, 1908	5 36
L. P. O. Noel.	" Mrs. Noel's railway fare	31 45
E. O'Kelly.	" expenses	42
F. A. McDiarmid.	" survey of 1907	4 25
D. H. Nelles.	" "	50
J. B. Challies.	" travelling expenses.	4 80
S. Mabey.	" "	100 94
H. H. Rowatt.	" "	6 25
Jas. Foster, per Immigration Commissioner.	" immigration cheque No. 10519 of Nov. 15, 1907	9 00
W. W. Cory.	" travelling expenses	93 10
W. C. Jacques.	" survey of 1907	18 00
Albert McLeod.	" salary for March, 1908, paid twice.	100 00
H. Douglas.	" over-payment to J. H. Ashdown in March, 1908.	30

9-10 EDWARD VII., A. 1910

G.—STATEMENT of Casual Revenue for the Fiscal Year ended March 31, 1909—*Con.*

Name.	Particulars.	Amount.
<i>Casual Revenue, Northwest Territories.</i>		\$ cts.
A. Larose.....	Liquor permit.....	2 00
Rev. F. Sevrier.....	".....	1 00
Hudson's Bay Co.....	".....	50 35
".....	".....	4 00
".....	".....	3 00
Alex. Gardner.....	".....	2 00
H. Winterton.....	".....	2 00
L. L. Andrews.....	".....	2 00
R. D. Rough.....	".....	2 00
Wm. Campbell.....	".....	2 00
Hudson's Bay Co.....	".....	3 00
".....	".....	3 00
Rev. C. G. Fox.....	".....	2 00
Hudson's Bay Co.....	".....	4 00
E. Carter.....	".....	2 00
O. Lacroix.....	".....	4 00
Hudson's Bay Co.....	".....	49 00
".....	".....	25 50
C. Wood.....	".....	2 00
Wm. Cobban.....	".....	2 00
J. F. Drummond.....	".....	2 00
Fred Fisher.....	".....	2 00
Matthew Buck.....	".....	2 00
<i>Casual Revenue Relief Advances.</i>		172 85
Casual Revenue, repayments of Relief		
Mortgages and seed grain advances		10,780 20
Relief Mortgages 1876.....		847 86
Seed Grain Advances, 1894.....		1,380 47
"..... 1896.....		344 64
"..... 1900.....		95 47
"..... 1901.....		716 68
"..... 1905.....		1,050 15
		4,435 27
		26,224 29

CHAS. H. BEDDOE,
*Superintending Accountant.*DEPARTMENT OF THE INTERIOR,
ACCOUNTS BRANCH,
OTTAWA, June 10, 1909.

H.—STATEMENT showing Repayments on account of Seed Grain Advances and Relief Mortgages for the Fiscal Year ended March 31, 1909.

	Seed Grain Advances, 1908.	Seed Grain Advances, 1905.	Seed Grain Advances, 1901.	Seed Grain Advances, 1900.	Seed Grain Advances, 1896.	Seed Grain Advances, 1895.	Seed Grain Advances, 1894.	Seed Grain to Settlers Account, 1890.	Territorial Account, 1886-87-88.	Relief Mortgages, 1876.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Refunds ..	45,719 32	1,050 15	716 68	95 47	344 64	1,247 23	1,380 47	1,143 80	1,045 24	847 86	53,590 86
	1,314 78	14 51	.....	5 30	6 60	52 84	18 54	2 40	52	90	1,416 39
	44,404 54	1,035 64	716 68	90 17	338 04	1,194 39	1,361 93	1,141 40	1,044 72	846 96	52,174 47

CHAS. H. BEDDOE,
*Superintending Accountant.*DEPARTMENT OF THE INTERIOR,
ACCOUNTS BRANCH,
OTTAWA, June 10, 1909.

I.—STATEMENT of Gross Receipts on account of Dominion Lands Revenue for the fiscal year ended March 31, 1909.

Month.	Homestead Fees.		Pre-emption & Purchased Homestead Fees.		Improvements.		General Sales of Lands.		Timber Dues.		Rental from Grazing Lands.		Export Tax on Gold, Mining Fees, &c.		Rocky Mountains Park of Canada.		Survey Fees.		Map Sales, Rental, Office Fees, and Miscellaneous.		Total.
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	
1908.																					
April	29,685 00				6,441 49		27,584 20		24,799 94		1,495 11		8,999 21		2,709 79		167 92		955 52		102,848 18
May	27,635 00				8,713 88		25,908 40		32,546 24		3,723 83		14,472 90		2,811 07		104 73		5,169 07		121,055 12
June	32,115 00				6,636 56		36,534 66		18,425 02		4,493 32		35,039 18		1,988 29		224 97		3,435 59		138,892 59
July	28,080 00				5,245 70		30,778 18		22,062 72		2,967 51		30,920 79		4,637 90		78 76		2,929 99		127,656 85
August	18,544 00				5,463 80		86,885 79		13,218 16		3,908 35		25,745 98		2,219 37				826 88		152,762 33
September	79,065 00		78,170 15		5,325 05		93,713 57		20,918 44		2,153 29		26,423 54		3,622 25		41,012 77		663 98		331,078 04
October	52,135 00		23,170 00		4,319 74		40,580 15		19,835 20		4,155 49		53,573 82		4,306 39		273 06		934 41		296,283 26
November	38,225 00		14,310 00		5,365 07		103,302 65		19,080 56		5,335 98		12,812 18		629 50				879 90		199,940 84
December	30,950 00		14,810 00		5,961 67		331,557 44		20,892 38		10,093 18		7,934 95		1,005 42				1,068 79		424,263 83
1909.																					
January	13,040 00		5,715 00		4,279 13		36,296 81		33,193 65		1,967 63		14,776 57		2,048 75		128 50		1,243 12		112,689 16
February	13,610 00		4,110 00		6,400 89		65,475 56		27,853 17		3,426 94		7,289 39		699 67				19,123 76		147,911 38
March	25,365 00		9,510 00		6,775 88		72,874 87		17,020 04		3,612 16		15,063 66		4,643 50		397 60		6,015 69		161,878 40
	389,039 00		149,795 15		70,928 86		951,442 28		269,837 52		53,312 79		262,972 17		31,321 20		42,388 31		43,246 70		2,254,283 98

CHAS. H. BEDDOE,
Superintending Accountant.

DEPARTMENT OF THE INTERIOR,
ACCOUNTS BRANCH,
OTTAWA, June 10, 1909.

9-10 EDWARD VII., A. 1910

J.—DOMINION LANDS REVENUE.

STATEMENT of Gross Receipts (Cash and Scrip) on account of Dominion Lands Revenue for the fiscal year ended March 31, 1909, compared with the previous fiscal year.

Particulars.	Fiscal year ended March 31, 1909.	Fiscal year ended March 31, 1908.	Increase.	Decrease.	Net increase
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Dominion Lands Agencies.	1,575,354 23	1,082,693 22	492,661 01		
Crown Timber Agencies.	243,354 88	456,053 72		212,698 84	
Hay, Mining, Coal, Grazing, &c.	123,797 12	82,274 43	36,522 69		
Miscellaneous.	70,809 42	180,587 83		109,778 41	
Rocky Mountains Park.	31,321 20	27,232 87	4,088 33		
	2,044,636 85	1,833,842 07	533,272 03	322,477 25	
Yukon Territory.	233,041 21	260,737 10		27,695 86	
	2,277,678 09	2,094,579 17	533,272 03	350,173 11	183,098 92

NOTE—Increase in Dominion Lands revenue \$210,794.78.
Decrease in Yukon Territory revenue \$27,695.86.

CHAS. H. BEDDOE,
Superintending Accountant.

DEPARTMENT OF THE INTERIOR,
ACCOUNTS BRANCH,
OTTAWA, June 10, 1909.

No. 30.

REPORT OF THE ORDNANCE AND ADMIRALTY LANDS BRANCH.

DEPARTMENT OF THE INTERIOR,
ORDNANCE AND ADMIRALTY LANDS BRANCH,
OTTAWA, April 30, 1909.

W. W. CORY, Esq.,
Deputy Minister of the Interior.
Ottawa.

SIR,—I have the honour to submit the following report upon the work in connection with this branch of the department covering the fiscal year ending March 31, 1909.

During the period covered by this report two sales of Ordnance lands by public auction were held, at Grand Falls, N.B., and Niagara-on-the-Lake, Ontario, respectively, a detailed report of which is given under the heading of these localities.

Regarding those properties previously sold or held under leases issued by the Imperial authorities, with the right of renewal and option of purchasing upon payment in cash of the amount of consideration money placed thereon, 16 full lots and 8 part lots situated in the several localities hereunder mentioned and in the annexed statement marked 'A,' have been paid for in full and letters patent issued therefor:—

(1) Chambly, P.Q.—Three lots, forming portions of the ordnance reserve situated within the limits of this village which were put up at public auction in 1905 and sold for the sum of \$950 were paid for in full and letters-patent issued. The balance of purchase money received during the fiscal year was \$237.50.

SESSIONAL PAPER No. 25

(2) Gloucester Township.—Sub-lot No. 21 of lot No. 21, Junction Gore, being a portion of the land in this township acquired for the purposes of the Rideau canal, but the same not being required for the use of the canal was transferred to this department to be dealt with in the usual manner. The lot in question was sold in 1905 for the sum of \$500, and the balance of purchase money amounting to \$100 having been paid within the last fiscal year, letters-patent were issued.

(3) Grand Falls, N.B.—A sale of ordnance lots was held in the town of Grand Falls in May last, at which six farm lots and twenty-two town lots were offered for sale. Three of the former were sold for the sum of \$246, and all the latter were disposed of at an average price of \$88.32 or a total of \$1,943. The total amount realized by this was \$2,189, one-fifth, or \$437.80, being paid on account.

Nine other lots, forming part of the reserve in this locality and sold at various dates for the sum of \$766.50 were paid for in full and letters-patent issued. The balance of purchase money received within the fiscal year was \$197.88.

(4) Montreal.—In accordance with the provisions of the Act, Chapter 51, passed last session, confirming the orders in council of December 6, 1905, and July 27, 1907, St. Helen's Island in the St. Lawrence river opposite the city, and part of the Logan farm, now known as Lafontaine Park, were sold to the city of Montreal for the sum of \$200,000. This sum was transferred to the credit of the Minister of Militia and Defence, as provided by the Act above mentioned.

(5) Niagara-on-the-Lake.—The five lots situated in this town, being part of the subdivision of the hospital lots, and which were withdrawn from sale in 1907, were again offered for sale by public auction in August last, and were sold for the sum of \$1,765, an average price of \$353 each and an advance of \$515 on the upset price; one-fifth of the purchase money, or \$353, being paid-down at the time of sale.

Since the date of sale the balance of the purchase money on one of these lots was paid in full and letters-patent issued therefor.

(6) Ottawa.—The lots in this locality are leasehold properties held under provisions contained in the original leases issued by the Imperial authorities with the privilege of converting the leasehold rights into freehold upon payment in cash of the amount of consideration money placed thereon. Within the last fiscal year two whole lots and eight part lots were redeemed and letters-patent issued. The total sum received as consideration money was \$836.33.

The following statements are hereto annexed:—

A.—Statement giving the number of lots and part lots sold or redeemed; the amounts for which such lots were originally disposed of and the sums received during the fiscal year as instalments or balances of purchase money.

B.—Statement naming the various localities where ordnance lands are situated on account of which moneys have been received during the fiscal year.

C.—Statement showing the receipts each month of the fiscal year classified as fees, rent or interest equivalent to rent and principal.

D.—Statement showing amounts due and unpaid on account of purchase money and rent or interest. The total amount shown to be outstanding is \$61,632.92.

The correspondence and general routine work in connection with this branch average about the same as for the previous fiscal period. The number of letters received, registered and filed was 441; number of letters written, copied and indexed 452, which, together with 613 letters in the form of accounts and circulars sent out makes a total of 1,045 letters mailed from this branch, an increase of 74 over last year. There were also 56 reports upon various ordnance lands matters prepared and submitted. The number of assignments received, examined and registered during the period covered by this report was 25, an increase of 2; 22 draft letters-patent were prepared and one new lease was issued.

There are 239 accounts with purchasers and tenants of ordnance lands now open in the ledgers of this branch, an increase of 24, necessitated by the sales held within

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the past year at Grand Falls and Niagara; these have been carefully and regularly posted. The receipt book, cash book and monthly statement book have been diligently and carefully kept, and a monthly return of all moneys received regularly furnished to the accountant of the department.

I beg to supplement the foregoing report upon the work in connection with the ordnance and admiralty lands by a synopsis of the work carried on in this branch in connection with the copying, comparing, recording, printing, indexing and filing of all the orders in council passed from time to time effectively dealing with and regulating the various important matters relating to the administration of this department in its many branches.

The number of orders in council passed during the last year was about the same as that of the previous year, and the volume and importance of the work done in connection with these valuable departmental records, in order that they may be available for immediate reference, cannot be overestimated.

The orders in council, as received, are copied, compared and entered in the record book kept expressly for that purpose, and a requisition issued on the superintendent of printing for a printed supply sufficient for departmental requirements. The proof is carefully read and corrected, and when the printed copies are received they are checked off, numbered and filed for future use. An alphabetical index of the orders passed each year is prepared and printed and a number of volumes of the orders bound for convenience of reference, and distributed among the various branches of the department.

Since the date of the last report the bound volumes of orders in council for the year 1904 were received and distributed among the several branches of the department; an index for the orders for 1905 prepared and printed, while the orders for that year have been collected and checked preparatory to being bound and are almost ready to be placed in the hands of the binder.

Orders in council altering or amending any of the existing regulations are, in accordance with the provisions of the Dominion Lands Act, published for four consecutive weeks in the *Canada Gazette*, and those affecting lands in the railway belt are, in addition, published in *British Columbia Gazette* for a similar period, and a return of these orders is made to the Senate and House of Commons within the first fifteen days after the opening of each session of parliament.

A record of the attendance of the numerous officials in the department is also carefully and regularly kept.

I have the honour to be, Sir,
Your obedient servant,

JOS. P. DUNNE,
*Clerk in Charge of Ordnance
and Admiralty Lands.*

SESSIONAL PAPER No. 25

A.—STATEMENT giving the number of Lots and part Lots sold or redeemed; the amount for which such lots were originally disposed of and the sums received as instalments or balances of purchase money during the fiscal year ending March 31, 1909.

Locality.	Number of lots sold or redeemed.	Amount of consideration or purchase money.	Amount received on account during the fiscal year.	Remarks.
		\$ cts.	\$ cts.	
Chamblly	3 lots.....	950 00	237 50	Balance of purchase money.
Gloucester.....	1 lot.....	500 00	100 00	" "
Grand Falls.....	3 farm lots. }	2,189 00	437 80	First instalments.
"	22 town lots. }			
"	9 lots.....	766 50	197 88	Balance of purchase money.
Montreal.....	St. Helen's Is land and part of the Logan farm.....	200,000 00	200,000 00	Purchase price in full.
Ningara-on-the-Lake...	5 lots.....	1,765 00	629 00	First instalment and balance of purchase money.
Ottawa.....	2 whole lots. }	836 33	836 33	Consideration in full.
"	8 part lots. }			
Refund		207,006 83	202,438 51	
		200,000 00	200,000 00	
		7,006 83	2,438 51	

JOS. P. DUNNE,

Clerk in Charge of Ordnance and

Admiralty Lands Branch.

B.—STATEMENT naming the various localities where Ordnance Lands are situated on account of which moneys have been received during the fiscal year ending March 31, 1909.

Locality.	Amount.	Locality.	Amount.
	\$ cts.		\$ cts.
Amherstburg.....	2 00	Oxford.....	13 20
Burlington Beach	280 00	Prescott.....	2 00
Chamblly.....	250 38	Quebec.....	800 00
Edmundston.....	1 00	Queenston.....	1 00
Elmsley.....	4 60	Sarnia.....	200 00
Fort Cumberland.....	50 00	Shelburne.....	3 00
Fort Erie.....	22 00	Sorel.....	358 72
Gloucester.....	103 20	Storrington.....	50 00
Grand Falls.....	811 66	St. Joseph's Island.....	7 72
Grenville.....	2 40	Toronto.....	122 40
Kingston.....	154 25	Wolford.....	2 40
Longueuil.....	250 00	Registration fees.....	92 50
Montreal.....	2 0,000 00		
Niagara.....	353 00		205,747 46
Niagara-on-the-Lake	281 75	Less refund.....	200,037 30
Oromocto.....	25		
Ottawa.....	1,446 03	Total	5,710 16
Owen Sound.....	22 00		

JOS. P. DUNNE,

Clerk in Charge of Ordnance and

Admiralty Lands Branch.

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C.—STATEMENT showing the Receipts each month of the fiscal year classified as fees, rent, or interest equivalent to rent, and principal.

Mouth.	Fees.	Rent or Interest.	Principal.	Total.
1908.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
April.....		214 50	66 00	280 50
May.....		109 30	604 60	713 90
June.....	16 00	425 75	285 00	726 75
July.....	8 00	860 53	91 88	960 41
August.....	4 60	587 10	353 50	944 10
September.....	2 00	33 45	367 00	402 45
October.....	14 00	372 22	92 50	478 72
November.....	2 00	38 00	90 00	130 00
December.....	2 50	136 05	111 33	249 88
1909.				
January.....	18 00	25 85	366 00	409 85
February.....	8 00	194 70	200,000 00	200,202 70
March.....	18 00	130 20	100 00	248 20
	92 50	3,127 65	202,527 31	205,747 46
Less refund in month of May.....				34 80
Less refund in month of August.....				2 50
Less refund in month of February.....				200,000 00
Total.....				5,710 16

JOS. P. DUNNE,
*Clerk in charge of
 Ordnance and Admiralty Lands Branch.*

SESSIONAL PAPER No. 25

D.—STATEMENT showing Amounts Due and unpaid on account of purchase money and rent or interest for the fiscal year ended March 31, 1909.

Locality.	Rent or Interest.	Principal.	Total.
	\$ cts.	\$ cts.	\$ cts.
Beaver Harbour.....	8 00		8 00
Burlington Beach.....	120 00		120 00
Carillon.....	5 20		5 20
Chambly.....	275 49	347 00	622 49
Dalhousie.....	11 04	23 00	34 04
Edmunston.....	35 08	38 40	73 48
Elmsley.....	5 60		5 60
Fort Cumberland.....	156 00		156 00
Grand Falls.....	387 74	972 02	1,359 76
Kingston.....	108 39	50 96	159 35
Longueuil.....	2 00		2 00
Marlborough.....	1 00		1 00
Montreal.....	1 00		1 00
Nepean.....	52 00		52 00
Niagara.....	20 72	53 60	74 32
Oronoto.....	25		25
Ottawa.....	3,147 01		3,147 01
Owen Sound.....	52 00		52 00
Oxford.....	4 00		4 00
Point Pelee.....	1 00		1 00
Presqu'isle.....	2 00		2 00
Sorel.....	1,185 28		1,185 28
St. Croix River.....	2 00		2 00
Toronto.....	2,340 00	52,000 00	54,340 00
Township of Tay.....	8 00		8 00
Turkey Point.....	37 34		37 34
Wolford.....	179 80		179 80
	8,147 94	53,484 98	61,632 92

JOS. P. DUNNE,

Clerk in charge of

Ordinance and Admiralty Lands Branch.

9-10 EDWARD VII., A. 1910

No. 31.

REPORT OF THE CORRESPONDENCE REGISTRATION BRANCH.

DEPARTMENT OF THE INTERIOR,

CORRESPONDENCE REGISTRATION BRANCH,

W. W. CORY, Esq.,

OTTAWA, May 27, 1909.

Deputy Minister of the Interior,

Ottawa.

SIR,—I have the honour to place before you statement A, showing the number of letters filed during the fiscal year ended March 31, 1909, and the amount of money received, registered and sent to the accountant; also statement B, showing the number of letters and the amount of money received during each fiscal year from 1900 to March 31, 1909.

There were 260,142 letters recorded during the year just closed, an increase of 38 per cent over 1908, but much mail matter, in the nature of simple acknowledgments of departmental communications, copies of letters from agents, requests for information usually supplied in pamphlets, &c., which formerly was registered, would, it is estimated, increase the number of letters received to 312,170, making a total average of more than a thousand a day.

Your obedient servant,

J. M. ROBERTS,

Chief of Branch.

A.—STATEMENT showing the number of letters received and recorded and the money received during the Fiscal Year ended March 31, 1909.

	Letters Received.	Daily Average.	Registered Letters Received.	Registered Letters Sent.	Money Received.
—					\$ cts.
1908.					
April...	15,215	634	1,664	2,813	91,114 67
May.....	14,730	614	855	2,510	42,413 22
June.....	19,240	740	1,654	3,040	73,120 02
July.....	18,030	700	854	3,024	100,597 11
August....	21,547	862	1,046	3,252	63,055 65
September..	18,410	735	803	3,111	49,332 04
October....	24,525	908	908	3,235	127,554 67
November...	26,710	1,113	1,257	4,094	537,446 15
December...	27,155	1,131	1,373	4,193	165,255 06
1909.					
January.....	27,350	1,140	1,466	4,168	90,129 43
February....	23,005	1,002	1,420	3,998	305,605 71
March.....	24,215	897	1,810	4,306	132,652 44
Total.....	260,142		14,510	41,744	1,798,276 17

J. M. ROBERTS,

Chief of Branch.

DEPARTMENT OF THE INTERIOR,

CORRESPONDENCE REGISTRATION BRANCH,

OTTAWA, May 27, 1909.

SESSIONAL PAPER No. 25

B.—STATEMENT showing the number of letters received and recorded and the money received during each Fiscal Year from 1900 to March 31, 1909.

Fiscal Year.	Letters Received and Recorded.	Money Received.
		8 cts.
1900.....	48,663	200,831 71
1901.....	67,860	333,534 02
1902.....	67,722	332,999 87
1903.....	87,851	629,585 47
1904.....	113,074	630,355 44
1905.....	135,908	528,219 76
1906.....	176,729	875,933 54
1907 (nine months).....	150,462	1,337,780 94
1908.....	187,684	1,568,240 32
1909.....	260,142	1,798,276 17

J. M. ROBERTS,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
CORRESPONDENCE REGISTRATION BRANCH,
OTTAWA, May 27, 1909.

No. 32.

REPORT OF THE CORRESPONDENCE COMPARING AND MAILING OFFICE.

DEPARTMENT OF THE INTERIOR,
CORRESPONDENCE COMPARING AND MAILING OFFICE,

OTTAWA, April 19, 1909.

W. W. CORY, Esq.,
Deputy Minister of the Interior,
Ottawa.

SIR,—I have the honour to submit to you herewith a statement showing the work done in the comparing and mailing office of the Department of the Interior during the fiscal year ended March 31, 1909.

I have the honour to be, sir,
Your obedient servant,

CHAS. C. PELLETIER,
Clerk in Charge.

9-10 EDWARD VII., A. 1910

STATEMENT of the work done in the Comparing and Mailing Room during the Fiscal Year ended March 31, 1909.

From April 1, 1908, to March 31, 1909.	Letters Sent.	Registered Letters Sent.	Telegrams sent.	Totals.
1908.				
April	23,340	2,813	87	26,240
May	24,453	2,510	76	27,039
June	25,874	3,040	85	28,999
July	23,886	3,024	77	27,087
August	25,564	4,298	102	29,964
September	26,779	3,111	230	30,120
October	28,345	3,235	171	31,751
November	25,542	4,094	202	29,838
December	25,923	4,193	139	30,255
1909.				
January	26,614	4,168	114	30,896
February	29,390	3,998	95	33,483
March	38,712	4,306	257	43,255
Total for fiscal year ending March 31, 1909.	324,522	42,790	1,615	368,927

These outgoing letters were copied in 149 one-thousand paged letter-books, compared with 135 letter-books for the same period last year, or an increase of 10 per cent.

Besides the verifying of each letter and the checking of the thousands of enclosures accompanying them, there were 1,000 pages of documents, &c., compared during the year. The number of inclosures sent with the letters has augmented fully 35 per cent. This can be accounted for through the changes in the Dominion lands regulations and the issuing of volunteer bounty land warrants, the latter being responsible for a very large correspondence asking for information, both general and special, in relation thereto.

The number of pages of letter-books indexed was 148,046, compared with 131,367 last year; increase, 12½ per cent; almost every page was indexed in double entry.

The daily average of letters sent out was 1,083, an increase of more than 12 per cent over last year. The heaviest daily average was during the month of March, when it reached the total of 1,434, as many as 1,820 letters being sent out in one day. The lightest month was July, with an average of 888.

The grand total for this office during the fiscal year was 368,927, or an increase of 40,069 letters.

CHAS. C. PELLETIER,
Clerk in Charge.

No. 33.

REPORT OF THE LAND PATENTS BRANCH.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,

W. W. CORY, Esq.,

OTTAWA, May 25, 1909.

Deputy Minister of the Interior,
Ottawa.

SIR,—I have the honour to submit for your information the statements hereinafter enumerated for the fiscal year ended March 31, 1909, in connection with the work performed in the Land Patents Branch.

A.—Statement showing the number of homestead entries as compared with the corresponding period of the previous year.

B.—Statement showing the number of pre-emptions, purchased homesteads and South African volunteer homesteads granted in each land agency.

C.—Statement of homesteads, pre-emptions, purchased homesteads, military homesteads and South African volunteer homesteads granted during each month.

D.—Statement showing the number of entries cancelled during the year, also the year in which such entries were made.

E.—Statement of entries affecting Dominion lands which were made at head office.

F.—Statement showing the number of acres of swamp lands in Manitoba transferred by order in council to the province of Manitoba.

G.—Statement showing South African volunteer bounty land certificates of 320 acres each issued under the Volunteer Bounty Act, 1908, by the Department of the Interior.

H.—Statement showing the number of assignments recorded in the Land Patents Branch.

I.—Statement of letters-patent covering Dominion lands situate in Manitoba, Saskatchewan, Alberta, British Columbia and the Yukon Territory.

J.—Statement of letters-patent covering Dominion lands situate in the province of Manitoba.

K.—Statement of letters-patent covering Dominion lands situate in the province of Saskatchewan.

L.—Statement of letters-patent covering Dominion lands situate in the province of Alberta.

M.—Statement of letters-patent covering Dominion lands situate in the province of British Columbia.

N.—Statement of letters-patent covering Dominion lands situate in the Yukon Territory.

O.—Statement showing the number of patents forwarded to the several registrars of the land registration districts of the provinces of Alberta and Saskatchewan and the Yukon Territory, and the number of notifications mailed to the patentees.

I have the honour to be, Sir,

Your obedient servant,

N. O. COTE,

Chief of Branch.

9-10 EDWARD VII., A. 1910

A.—STATEMENT showing the number of Homestead Entries made during the year ended March 31, 1909, as compared with the year ended March 31, 1908.

Agency.	1909.	1908.	Increase.	Decrease.	Remarks.
Battleford	3,385	4,535	1,150	} Net increase for fiscal year 1908-09, 8,657.
Brandon	171	90	81	.....
Calgary	2,707	1,278	1,429	.....
Dauphin	1,227	772	955	.....
Edmonton	5,166	4,055	1,111	.....
Estevan	833	502	331	.....
Humboldt	2,412	2,493	.....	81
Kamloops	400	195	205	.....
Lethbridge	3,818	2,456	1,362	.....
Moosejaw	8,710	5,181	3,529	.....
New Westminster	29	42	.....	13
Prince Albert	2,058	1,622	436	.....
Regina	1,553	1,653	.....	100
Red Deer	2,080	1,825	255	.....
Winnipeg	1,863	886	977	.....
Yorkton	2,169	2,839	670	.....
Total	39,081	30,424	10,671	2,014	

RECAPITULATION.

Month.	1909.	1908.	Increase.	Decrease.	Remarks.
January	1,308	1,453	145	} Net increase fiscal year 1908-09, 8,657.
February	1,364	1,420	.....	56
March	2,592	1,869	723	.....
.....	1908.	1907.	.....	.....
April	2,987	2,594	393	.....
May	2,773	3,253	.....	480
June	3,247	4,574	.....	1,327
July	2,815	3,690	.....	875
August	1,859	2,814	.....	955
September	7,934	2,395	5,539	.....
October	5,221	2,252	2,969	.....
November	3,876	2,261	1,615	.....
December	3,105	1,849	1,256	.....
Total	39,081	30,424	12,495	3,838	

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, May 25, 1909.

SESSIONAL PAPER No. 25

B.—STATEMENT showing the number of Pre-emptions, Purchased Homesteads and South African Veteran Homesteads granted in each Land Agency during the fiscal Year 1908-09 (from September 1, 1908, to March 31, 1909.

Agency.	Pre-emptions.	Purchased Homesteads.	South African Veteran Homesteads.
Battleford	864	137	13
Calgary	1,736	115	73
Edmonton	44	2	25
Estevan	911	57	.....
Humboldt	59	16	18
Lethbridge	2,656	70	43
Moosejaw	7,168	250	98
Prince Albert	62	54	17
Regina	437	169	5
Red Deer	124	21	38
Yorkton .....	.....	.....	15
Total.....	14,061	831	345

IN SASKATCHEWAN.

IN ALBERTA.

Pre-emptions.	Purchased Homesteads.	South African Veteran Homesteads.	Pre-emptions.	Purchased Homesteads.	South African Veteran Homesteads.
9,501	623	166	4,560	208	179

NOTE.—These grants were authorized by the Dominion Lands Act, which came into force September 1, 1909; and the Volunteer Bounty Act, assented to 20th July, 1908.

DEPARTMENT OF THE INTERIOR.

N. O. COTE,

LAND PATENTS BRANCH.

Chief of Branch.

OTTAWA, May 25, 1909.

C.—STATEMENT of Homesteads, Pre-emptions, Purchased Homesteads, Military Homesteads and South African Volunteer Homesteads granted during each month from April 1, 1908, to March 31, 1909.

1908.	Homesteads.	Pre-emptions.	Purchased Homesteads.	Military Homesteads.	South African Volunteer Homesteads.
April.....	2,987	.....	.....	.....	.....
May.....	2,773	.....	.....	.....	.....
June.....	3,247	.....	.....	.....	.....
July.....	2,815	.....	.....	.....	.....
August.....	1,859	.....	.....	.....	.....
September	7,934	7,374	445	.....	.....
October.....	5,221	2,193	126	1	.....
November.....	3,876	1,379	52	1	24
December.....	3,105	1,344	58	2	55
1909.					
January.....	1,308	538	32	.....	74
February.....	1,364	378	32	.....	52
March.....	2,592	865	86	.....	140
	39,681	14,061	831	4	345

DEPARTMENT OF THE INTERIOR.

N. O. COTE,

LAND PATENTS BRANCH.

Chief of Branch.

OTTAWA, May 25, 1909.

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D.—STATEMENT showing the number of entries cancelled during the year ended March 31, 1909, also the year in which such entries were made.

Year.	Homesteads.	Purchased Homesteads.	Pre-emptions.	Time-Sales.	Sales.
1871			1		
1872					
1873	1				
1874			1		1
1875					
1876					
1877					
1878	1		3		1
1879				1	
1880			1		
1881					
1882	3		2		
1883	1		6		
1884			7		
1885	1		4		
1886	1		3		
1887	1		1		
1888					
1889	4		7		
1890					
1891	3				
1892	2				1
1893	1				
1894	1				
1895	2				1
1896	3				
1897	2			1	
1898	2				
1899	9				
1900	6			1	
1901	31				1
1902	79				
1903	187				
1904	315			1	1
1905	899				1
1906	2,925			1	5
1907	5,532			1	
1908	4,647	21	219		
1909	18		5		
	14,677	21	260	6	12

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, May 25, 1909.

SESSIONAL PAPER No. 25

E.—STATEMENT of entries affecting Dominion Lands which were made at Head Office for the year ended March 31, 1909.

	No. of Grants	Acres.
Special grants..	352	4,217.00
Alberta Railway and Irrigation Company.. . . .		50,603.25
Calgary and Edmonton Railway Company... . .		20,340.10
Canadian Northern Railway Company.. . . .		231,826.88
Canadian Pacific Railway Co., Main Line.. . . .		53,105.45
Canadian Pacific Railway Co., Souris Br.. . . .		470.75
Canadian Pacific Railway Company, Pipestone extension, Souris Branch.. . . .		1,744.65
Manitoba and South Eastern Railway Co.. . . .		2,313.26
Manitoba Southwestern Colonization Railway Company...		497,538.72
Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Company		1,693.19
Area sold and patented to the Grand Trunk Pacific Railway for townsites.. . . .		12,905.45
Area granted to the Grand Trunk Pacific Railway for right of way.. . . .		3,534.46
Railway right of way..	96	2,483.77
Hudson's Bay Company's grants.. . . .	30	133,696.00
		<hr/> 1,016,472.93

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, May 25, 1909.

F.—STATEMENT showing the number of Acres of Swamp Lands in Manitoba transferred by Order in Council to the Province of Manitoba, up to March 31, 1909.

	Acres.
Total area transferred to March 31, 1908.. . . .	1,917,808.69
No lands were transferred during the year ending March 31, 1909.. . . .	
	<hr/> 1,917,808.69

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, May 25, 1909.

G.—STATEMENT showing South African Volunteer Bounty Land Certificates of 320 acres each issued under the Volunteer Bounty Act, 1908, by the Department of the Interior up to and including March 31, 1909.

	No.	Acres.
Certificates issued..	5,279	1,689,280
Certificates located..	345	110,400

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, May 25, 1909.

9-10 EDWARD VII., A. 1910

H.—STATEMENT showing the number of Assignments recorded in the Land Patents Branch during the year ended March 31, 1909.

Number of deeds registered.....	239
Fees received in connection therewith.....	\$476 50

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, May 25, 1909.

N. O. COTE,
Chief of Branch.

I.—STATEMENT of Letters-Patent covering Dominion Lands situate in Manitoba, Saskatchewan, Alberta, British Columbia and the Yukon Territory issued from the Department of the Interior during the Fiscal Year ending March 31, 1909, as compared with the fiscal Year ending March 31, 1908.

Nature of Grant.	FROM APRIL 1, 1908, TO MARCH 31, 1909.		FROM APRIL 1, 1907, TO MARCH 31, 1908.	
	Patents.	Acres.	Patents.	Acres.
1. Alberta Railway and Irrigation Co. sales.....	44	15,531	29	17,932
2. Assignment of mortgages.....	10			
3. British Columbia homesteads.....	103	14,903	102	14,783
4. British Columbia sales.....	24	1,603	49	2,730
5. Coal lands sales, under rights (1,379 acres).....	34	8,460	36	7,903
6. Commutation grants.....	8	331	6	281
7. Half-breed allotments.....	1		1	240
8. Homesteads.....	19,929	3,159,779	14,506	2,300,706
9. Hudson's Bay Company.....	16	3,296	3	1,761
10. Leases.....	1	516	3	
11. License of occupation.....	13		6	
12. Manitoba Act grants.....	14	842	4	117
13. Manitoba University grants.....	6	891		
14. Military bounty grants.....	1	160		
15. Military homesteads.....	1	320	9	2,872
16. Mineral rights (18,194.38 acres).....	91		39	
17. Mining lands sales.....	1	8	6	102
18. Northwest half-breed grants.....	131	22,861	220	37,255
19. Parish sales.....	12	1,311	6	1,546
20. Quit claim, special grants (2,955.09 acres).....	18		12	
21. Railways—				
20A. Alberta Railway and Irrigation Company.....	3	46,067		
21. Alberta Railway and Coal Co.....	3	4,644		
22. Calgary and Edmonton Railway Co.....	24	20,448	93	85,975
23. Calgary and Edmonton Railway Co., under rights.....			9	
24. Canadian Northern Railway Co.....	234	233,388	1,330	2,138,422
25. Canadian Pacific Railway grants.....	79	53,745	246	377,427
26. Canadian Pacific Railway grants, Souris branch.....	11	2,215	50	94,611
27. Canadian Pacific Railway roadbed and station grounds.....	6	131	76	1,062
28. Grand Trunk Pacific Railway.....	287	15,793	33	361
29. Manitoba and Southeastern Railway Co.....	8	2,313	471	676,160
30. Manitoba and Northwestern Railway Co.....	2	14	34	29,421
31. Manitoba Southwestern Colonization Railway Co.....	215	497,693	192	52,779
32. Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Co.....	11	1,783	10	5,911
33. Saskatchewan and Western Railway.....			43	98,886
34. Sales.....	557	72,349	607	159,060
35. School lands sales.....	240	27,195	189	21,949
36. Special grants.....	166	4,500	204	6,579
37. Special grants, under rights (41,538 acres).....	71			
38. Yukon Territory sales.....	57	2,236	65	2,147
39. Yukon Territory specials.....			1	
Totals.....	22,431	4,215,326	18,690	6,138,977

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, May 25, 1909.

N. O. COTE,
Chief of Branch.

SESSIONAL PAPER No. 25

J.—STATEMENT of Letters-Patent covering Dominion Lands situate in the Province of Manitoba, issued from the Department of the Interior during the Fiscal Year ending March 31, 1909.

Nature of Grant.	No. of Patents.	No. of Acres.
Assignment of mortgages.....	10	
Coal lands sales.....	4	831
Commutation grants.....	8	331
Homesteads.....	1,013	156,621
Manitoba Act grants.....	14	842
Manitoba University grants.....	6	891
Northwest half-breed grants.....	1	80
Parish sales.....	11	1,165
Railways—		
Canadian Northern Railway Co.....	47	31,883
Canadian Pacific Railway grants.....	4	658
Canadian Pacific Railway roadbed and station grounds.....	1	25
Grand Trunk Pacific Railway.....	2	23
Manitoba and Southeastern Railway Co.....	5	1,200
Manitoba Southwestern Colonization Railway Co.....	111	160,783
Sales.....	133	7,083
School lands sales.....	130	19,010
Special grants.....	11	703
Total.....	1,511	382,129

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, May 25, 1909.

N. O. COTE,
Chief of Branch.

K.—STATEMENT of Letters-Patent covering Dominion Lands situate in the Province of Saskatchewan, issued from the Department of the Interior during the fiscal Year ending March 31, 1909.

Nature of Grant.	No. of Patents.	No. of Acres.
Coal lands sales.....	1	20
Homesteads.....	13,054	2,072,668
Hudson's Bay Co.....	16	3,296
Leases.....	1	516
License of occupation.....	6	
Military homesteads.....	1	320
Mineral rights (320 acres).....	1	
Northwest half-breed grants.....	60	10,420
Parish sales.....	1	146
Quit claim, special grants (2,955·09 acres).....	18	
Railways—		
Canadian Northern Railway.....	185	201,272
Canadian Pacific Railway grants.....	29	5,060
Canadian Pacific Railway grants, Souris branch.....	10	2,015
Grand Trunk Pacific Railway grants.....	247	12,229
Manitoba and Northwestern Railway.....	2	14
Manitoba Southwestern Colonization Ry. Co.....	83	138,787
Manitoba and Southeastern Railway.....	3	1,113
Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Co.....	11	1,783
Sales.....	263	41,549
School lands sales.....	88	6,494
Special grants.....	96	1,588
Special grants, under rights (29, 831·99 acres).....	48	
Total.....	14,224	2,499,290

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, May 25, 1909:

N. O. COTE,
Chief of Branch.

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L.—STATEMENT of Letters-Patent covering Dominion Lands situate in the Province of Alberta, issued from the Department of the Interior during the fiscal year ending March 31, 1909.

Nature of Grant.	No. of Patents.	No. of Acres.
Alberta Railway and Irrigation Company sales.....	47	61,598
Coal lands sales.....	29	7,609
Homesteads.....	5,862	930,491
License of occupation.....	7	.....
Military bounty grants.....	1	160
Mineral rights (17,874.38 acres).....	90	.....
Mining lands sales.....	1	8
Northwest half-breed grants.....	70	12,361
Railways—		
Alberta Railway and Coal Co.....	3	4,644
Calgary and Edmonton Railway Co.....	24	20,448
Canadian Northern Railway Co.....	2	234
Canadian Pacific Railway grants.....	46	48,026
" " " " (Souris branch).....	1	200
Grand Trunk Pacific Railway.....	38	3,541
Manitoba Southwestern Colonization Railway Co.....	21	198,122
Sales.....	161	23,717
School lands sales.....	22	1,691
Special grants.....	59	2,210
" " under rights (11,706.51 acres).....	23	.....
Total.....	6,507	1,315,060

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, May 25, 1909.

M.—STATEMENT of Letters-Patent covering Dominion Lands situate in the Province of British Columbia, issued from the Department of the Interior during the fiscal year ending March 31, 1909.

Nature of Grant.	No. of Patents.	No. of Acres.
British Columbia homesteads.....	103	14,903
" " sales.....	24	1,603
Railways—Canadian Pacific Railway roadbed and station grounds.....	5	105
Total.....	132	16,611

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, May 25, 1909.

SESSIONAL PAPER No. 25

N.—STATEMENT of Letters-Patent covering Dominion Lands situate in the Yukon Territory, issued from the Department of the Interior during the fiscal year ending March 31, 1909.

Nature of Grant.	No. of Patents.	No. of Acres.
Yukon Territory sales.....	57	2,236

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, May 25, 1909.

O.—STATEMENT showing the number of patents forwarded to the several registrars of the land registration districts of the Province of Alberta, Saskatchewan and Yukon Territory, and the number of notifications mailed to patentees during the year, April 1, 1908, to March 31, 1909, inclusive.

Registration District.	No. of Patents sent to Registrars.	No. of Notifications mailed to Patentees.
Assiniboia.....	8,839	8,851
Yorkton.....	1,213	1,283
East Saskatchewan.....	2,638	2,607
West Saskatchewan.....	1,511	1,603
North Alberta.....	3,420	3,396
South Alberta.....	3,031	3,045
Yukon.....	46	51
Total	20,698	20,926

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, May 25, 1909.

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No. 34.

REPORT OF THE CHIEF GEOGRAPHER.

DEPARTMENT OF THE INTERIOR,

OFFICE OF THE CHIEF GEOGRAPHER,

OTTAWA, March 31, 1909.

W. W. CORY, Esq.,

Deputy Minister of the Interior,
Ottawa.

SIR,—I have the honour to report as follows on the work of my office for the past year.

The staff as constituted under the new Civil Service Act is as follows:—

Division I.—Grade B.

Chalifour, J. E., Chief Draughtsman.

Division II.—Grade A.

Baine, H. E.
Taché, Henri.
Anderson, W.

Inkster, Fred.
Bryant, E. D.
Beveridge, Jas.

Division II.—Grade B.

Akerlindh, A.
Grindlay, T.
Darrach, A. M.
Blatchly, H.
Dumouchel, G. E.
Wilson, H. W.
Chandler, S.

Bennie, J.
Craig, R. W.
Groulx, A.
McElligott, J.
Blue, W. A.
Pigeon, J. H.

Division III.—Grade A.

Waine, Mrs. D. E.

Gagnon, J. S.

Division III.—Grade B.

Stewart, Miss Mary.

Merrifield, J. R.

Miss Mary Stewart was appointed May 1, 1908, to assist in the stenographic work and typewriting.

Mr. T. Grindlay was appointed August 11, 1908, and has since been employed on the Northern British Columbia and Nova Scotia 'Standard' sheets.

Mr. C. G. Wood, who was appointed January 2, 1903, died on February 23, 1909. Mr. Wood was an accurate and painstaking official whose kindly disposition endeared him to all with whom he came in contact.

The routine work of the office has been carried on as usual and a number of the 'Standard' topographical sheets are either completed or are nearing completion.

Sheet 11.—Montreal and Quebec sheet, has been delivered.

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Sheet 28.—English River sheet, colour proofs have been received and it will be printed shortly.

Sheet 2, N.E.—Belleville sheet, has been transferred and preliminary proofs from stone have been received.

Sheet 7, N.E.—Sault Ste. Marie sheet, 8 S.W.—Manitoulin sheet, 14 S.E.—Truro sheet, 5 N.W.—Halifax sheet, 14 S.W.—Springhill sheet, 14 S.E.—Charlottetown sheet, 31 S.E.—Abitibi sheet and 30 Missinaibi sheet are in the hands of the engravers.

Sheet 9, S.E.—Pembroke sheet, 10 S.W.—Ottawa sheet, 10 S.E.—Cornwall sheet, 3 N.W.—Kingston sheet, are nearly completed and will be issued at an early date.

The compilation of sheets 41, 42, 43, 44 and 45, covering the area traversed by the Grand Trunk Pacific in northern British Columbia, has been, perforce, suspended, pending the filing of the final location of the railway. As it is the only chained line through this area, it must serve as a base-line upon which the compilation of the other material will be made.

During the year, new editions of the maps of Manitoba, Saskatchewan, Southern Alberta and Northern Alberta have been prepared. Maps of the Winnipeg, Dauphin, Estevan, Humboldt, Yorkton, Prince Albert, Regina, Moosejaw, Battleford, Edmonton, Red Deer, Calgary and Lethbridge land districts were published for use by the agents of these districts. These maps give the available number of quarter-sections in each township, quality of the soil, &c. Similar maps are also required for the new districts of Saskatoon and Peace River.

An 'Elevator' map giving the elevator capacity at each station in Manitoba, Saskatchewan and Alberta has been published. It also contains tabular lists, arranged alphabetically under provinces, of the capacities of the elevators and of the flour and cereal mills in the west. The so-called three-sheet map of Manitoba, Saskatchewan and Alberta has been extended westward to the western boundary of the last-named province and is now, virtually, a four-sheet map.

In connection with the case of Great Britain respecting the North Atlantic fisheries, to be argued before the Hague tribunal during the coming summer, 16 maps and plans were prepared illustrating the main points in the British contention.

On September 5, I left Ottawa to join the excursion of the Canadian Mining Institute to the mines of Central and Western Canada. In 1907 the Canadian Mining Institute issued invitations to the Institution of Mining and Metallurgy, the Iron and Steel Institute, the Institution of Mining Engineers, the South Wales Institute of Engineers, the Mining Institute of Scotland and the Manchester Geological and Mining Society in Great Britain; L'Association des Elèves des Ecoles Spéciales, in Belgium; L'Association Amicale des Elèves de l'Ecole Nationale Supérieure des Mines, in France; and the Verein Deutscher Eisenhüttenleute in Germany, to appoint official delegates to come to Canada and take part in the excursion as the guests of the Canadian Mining Institute; while a general invitation was issued to the members of these respective societies to join the excursion on the same terms as members of the institute. The invitation was accepted by about thirty-five.

Prior to my joining the party, they had visited the coal mines and steel plants at Sydney and North Sydney, N.S., the asbestos and chrome-iron mines of the Eastern Townships, the hydro-electric power plants at Niagara Falls and the silver-cobalt mines at Cobalt.

On September 7 we left Sudbury for the Moose Mountain mines. At this point the Canadian Northern Company is developing iron properties and, at Key Harbour, on Georgian Bay, has constructed extensive docks, evidently intending to export the ore to the United States. On the return trip a short stop was made at Vermilion river to permit some of the party to test the gravel. A few 'colours' were obtained.

The following day, the smelter and the Crean Hill copper-nickel mine of the Canadian Copper Company were visited. The smelter contains five furnaces; total capacity 2,500 tons daily. The furnaces are fed by electric trains of charging cars

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with a capacity of 3,000 lbs. each. The plant is operated by electric energy generated at the High Falls of the Spanish river, 27 miles distant.

The Crean Hill mine, at present, consists of an open pit about 200 feet in diameter and 100 feet deep with four underground stopes below the pit floor. About 12,000 tons of ore carrying approximately 4 per cent copper and 2 per cent nickel, are shipped per month. On the return journey a visit was paid to the Mond Nickel Company's smelter at Victoria Mines.

On the 13th, Medicine Hat was reached and its famous natural gas well visited. We were informed that gas is supplied to the householder for $13\frac{1}{2}$ cents per 1,000 cubic feet and to the manufacturer for 5 cents. It is used in practically all the houses for illumination and in ranges and furnaces for heating. At this point Mr. E. Coste, under whose supervision the well was driven, gave an exhibition of the gas escaping burning and unburnt under a pressure of 600 lbs. to the square inch.

The following morning, the great rock slide at Frank was visited. Later, the party entered the mine of the International Coal and Coke Company, the time at their disposal permitting only a brief visit. The present output is about 2,000 tons per day. About one-half is sold to the Canadian Pacific Railway Company for locomotive use; the balance is converted into coke and sold to the British Columbia Copper Company, Greenwood, for its smelter. The estimated tonnage of available coal in the International Coal and Coke Company's mines is estimated at 50,000,000 tons. The length of the main entry in No. 2 seam is 9,000 feet.

Arriving at Hosmer at noon, the new plant of the Hosmer Mines, Ltd.—a subsidiary corporation of the Canadian Pacific—was examined. At the date of our visit, actual coal mining had not begun, the company being debarred from mining during the continuance of an agreement with the Crowsnest Pass Coal Company. The agreement expired in December last, and mining is now in progress and, when fully developed, will have a capacity of 4,000 tons per day. There are 240 beehive coke ovens with a total capacity of 300 tons per day.

Between Michel and Fernie the line traverses the area then recently swept by the great Fernie fire. Of the town of Fernie, naught remained except the coal company's offices and a half dozen houses. Everywhere rebuilding was being rushed, the population, in the meantime, living and transacting business in tents and hastily erected wooden structures.

In the afternoon the Coal Creek mines of the Crowsnest Pass Coal Company were visited. The company owns approximately 240,000 acres of coal lands. The coal is a high grade bituminous, makes an excellent coke and is a steam coal of unexceptionable quality. The present output is about 4,000 tons per day. The company owns 1,128 beehive ovens, with a total daily capacity of upwards of 2,000 tons of coke, which is sold to smelters in British Columbia and in the state of Washington.

On the 17th the St. Eugène mine and mill at Moyie were visited. The St. Eugène is the largest silver-lead mine in Canada; is owned and operated by the Consolidated Mining and Smelting Company. The crude ore averages about 18 per cent lead, but the concentrates shipped to the Trail smelter contain 65 per cent lead and 32 ounces of silver per ton. In 1907 the 125,000 tons of ore mined contained 607,000 ounces of silver and 27,000,000 pounds of lead.

As the power plant at Bonnington Falls was not reached till 11 p.m., the late hour prevented an extended examination. The West Kootenay Power Company operates this plant and supplies electrical energy to the Rossland, Phoenix and Greenwood districts and to the smelters at Trail, Grand Forks, Greenwood and Boundary Falls. There are 4 main units of 8,000 horse-power each, operating under a head of 70 feet.

The morning of the 16th was spent at the Trail smelter, owned by the Consolidated Mining and Smelting Company. The plant contains five copper blast furnaces with a combined capacity of 1,600 tons and two lead blast furnaces having a combined capacity of 350 tons of lead ore. The copper-gold matte from the furnaces is treated

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by the Huntington-Heberlein process, resmelted and concentrated to approximately 45 per cent copper and to 25 ounces of gold to the ton. The lead refinery has a daily capacity of 75 tons of, practically, pure lead. Part of the refined lead is manufactured into lead pipe and the balance shipped to the Orient. Copper sulphate is produced and shipped to Manitoba, Saskatchewan and Alberta where it is used for cleaning wheat.

In the year ending June 30, 1908, the smelter produced 121,380 ounces of gold, 2,224,888 ounces of silver, 32,157,139 pounds of lead and 4,004,468 pounds of copper, with a total value of \$5,428,501.

Arriving at Rossland at noon, the party divided to visit the Le Roi, Centre Star and War Eagle mines. The souvenir booklet, presented by the entertainment committee, gives the following statistics:—Le Roi mine, gross value of mineral output, 1894-1908, \$20,406,627; maximum depth of shaft, 1,700 feet, and total development, 21 miles. Consolidated Mining and Smelting Company, operating Centre Star, War Eagle and other mines, gross value of output, \$15,948,133; maximum depth of shaft, 2,200 feet, and total development, 19 miles. Le Roi No. 2, output, 1900-08, \$4,413,663, deepest working, 850 feet, and development work, 7 miles.

On September 17, the British Columbia Copper Company's Mother Lode mine and smelter at Greenwood were visited. The ore body is a low-grade copper deposit, approximately 2,000 feet long and from 80 to 110 feet wide, carrying values of \$4.50 to \$6 per ton. The present plant—which was being enlarged at the time of my visit in 1906—contains 3 large furnaces with a capacity of about 700 tons each per day. The blister copper produced is practically free from objectionable impurities and runs 99 per cent fine.

On the morning of the 18th, the party arrived at Phoenix, receiving a royal salute of twenty-one blasts on Granby hill. After inspecting the shaft-houses, compressor building and 'glory-hole,' a trip was made into the mine in cars hauled by an electric locomotive and the visitors were informed that there were, approximately, 20,000,000 tons of ore in sight. In the year ending June 30, 1908, the Granby mines produced 21,126,926 pounds of copper, 300,593 ounces of silver and 40,139 ounces of gold; gross value \$3,790,184. In the afternoon the Granby smelter at Grand Forks, was visited.

On the 19th, a fruit farm on Kootenay lake was visited and, in the afternoon, the Blue Bell mine and concentrator, now being operated by the Canadian Metal Company, were inspected. The deposit—notable for its extent—is chiefly low-grade galena with pyrrhotite, &c., and has been developed by open cuts and by a tunnel driven into the hillside. The lead mill has a capacity of 200 tons per day.

On the 22nd, a meeting of the western branch of the institute was held at Victoria and the visitors were welcomed by the Hon. Richard McBride, Premier of British Columbia, and Hon. Wm. Templeman, Minister of Mines for the Dominion.

On the 26th, the party left Victoria for Nanaimo, stopping at Ladysmith for a hurried visit to the Tyee Copper Co.'s smelter, which was, at that time, operating on custom ore, principally from the Japanese copper mine on the Queen Charlotte islands. At Nanaimo the Western Fuel Co.'s No. 1 shaft and Northfield (No. 4) Brechin mine were visited, also the Hamilton Powder Co.'s powder manufactory at Departure Bay. The No. 1 and Northfield mines are at present producing 600,000 or 700,000 tons per annum.

On the 27th, the Bankhead mines, near Banff, were visited. This is the only mine in Canada producing anthracite or, more properly, semi-anthracite. The three seams that are being mined are from 6 to 9 feet thick. All sizes of coal from 'broken' to 'buckwheat No. 3' are produced and, as the coal is somewhat fragile, a considerable proportion is briquetted. The briquettes are used on the Canadian Pacific locomotives and for domestic use. The present daily output is 750 tons sized coal and 500 tons briquettes.

Reaching Dunmore junction early in the evening of the 28th, Mr. Coste had the natural gas well lit that the party might enjoy the spectacle of a gas well with a daily

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capacity of 1,500,000 cubic feet and under a pressure of 600 pounds per square inch, burning at night. The gas in this well and in the four other wells in the vicinity was struck at a depth of about 1,000 feet.

The stop at Dunmore ended the technical portion of the trip and Ottawa was reached on the 30th.

During the year 8,903 letters were received, 9,419 sent out, 157,386 maps, parcels, &c., received and 162,308 sent out.

I have the honour to be, Sir,

Your obedient servant,

JAMES WHITE,

Chief Geographer.

MAPS PUBLISHED.

Railway map of the Dominion of Canada and Newfoundland, eight sheets; extends from the Atlantic to the Pacific and from Maryland and Oregon on the south to Cumberland sound and Herschell island on the north. Scale, 35 miles to 1 inch. Price, mounted, with rollers, \$3; mounted, without rollers, \$2.50.

Dominion of Canada and Newfoundland, Railway edition, 16 inches by 36 inches. Scale, 100 miles to 1 inch.

Dominion of Canada 'School' map. Scale, 58 miles to 1 inch.

Western Canada, map of portion of Canada west of Lake of the Woods, shows railway systems in distinctive colours. Scale, 35 miles to 1 inch.

Relief map of Canada. Scale, 100 miles to 1 inch.

Resource map of Canada. Scale, 200 miles to 1 inch.

Water-power map, average Rainfall at principal points in Canada. Scale, 100 miles to 1 inch.

Map showing principal Mineral Occurrences in Canada. Scale, 100 miles to 1 inch.

Map showing Forests in Canada. Scale, 200 miles to 1 inch.

Map showing Limits of Principal Forest Trees in Canada. Scale, 100 miles to 1 inch.

Elevator map, shows position and capacity of Elevators in Manitoba, Saskatchewan and Alberta, with tables of Elevator capacities in Canada and Milling capacities in western Canada.

National Transcontinental Railway map, shows route of the National Transcontinental Railway, Moncton to the Pacific. Scale, 100 miles to 1 inch.

Explorations in Northern Canada and adjacent portions of Greenland and Alaska. Scale, 75 miles to 1 inch.

Rocky Mountains (Banff sheet) contoured map of mountains in the vicinity of Banff. Scale, 2 miles to 1 inch.

Rocky Mountains (Lake Louise sheet) contoured map of mountains in the vicinity of Laggan and Field. Scale, 2 miles to 1 inch.

Manitoba, Saskatchewan, Alberta and adjoining portions of Keewatin and British Columbia, four sheets. Scale, 12½ miles to 1 inch.

Index map showing townships in Manitoba, Saskatchewan and Alberta, plans of which have been printed. Scale, 35 miles to 1 inch.

General map of the Northwestern portion of the Dominion of Canada. Edition of 1898. In 2 sheets. Scale, 35 miles to 1 inch.

Map showing Railways in Manitoba, Alberta and Saskatchewan. Scale, 35 miles to 1 inch.

Manitoba—map of province showing Dominion Electoral Divisions. Scale, 12½ miles to 1 inch.

Southern Saskatchewan—map of portion of the province south of latitude 55°. Scale, 12½ miles to 1 inch.

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Southern Alberta—map of portion of the province south of latitude 55°. Scale, 12½ miles to 1 inch.

Northern Alberta—map of portion of the province north of latitude 55°. Scale, 12½ miles to 1 inch.

Regina Land District. Scale, 12½ miles to 1 inch.

Red Deer Land District. Scale, 12½ miles to 1 inch.

Calgary Land District. Scale 12½ miles to 1 inch.

Estevan Land District. Scale, 12½ miles to 1 inch.

Winnipeg Land District. Scale, 12½ miles to 1 inch.

Lethbridge Land District. Scale, 12½ miles to 1 inch.

Edmonton Land District. Scale, 12½ miles to 1 inch.

Dauphin Land District. Scale, 12½ miles to 1 inch.

Yorkton Land District. Scale, 12½ miles to 1 inch.

Prince Albert Land District. Scale, 12½ miles to 1 inch.

Battleford Land District. Scale, 12½ miles to 1 inch.

Moosejaw Land District. Scale, 12½ miles to 1 inch.

Brandon Land District. Scale, 12½ miles to 1 inch.

Peace River District (Northern Alberta)—includes the country between Wetaskiwin and Lake Athabaska, and between Athabaska river and the eastern boundary of British Columbia. Scale, 12½ miles to 1 inch.

Map showing all the Even-numbered sections alienated in Manitoba, Saskatchewan and Alberta, 3 sheets. Scale, 12½ miles to 1 inch.

Odd-section map (Manitoba, Saskatchewan and Alberta)—shows Odd-numbered sections in these provinces that have been alienated as railway land grants, &c. Scale, 12½ miles to 1 inch.

British Columbia 'Railway Belt' map, showing the 'Railway Belt' in British Columbia. Scale, 1/500,000, or 7.89 miles to 1 inch.

Southeastern Alaska and portion of British Columbia. Edition of 1897. Scale, 1/960,000.

Southeastern Alaska and portion of British Columbia. Edition of 1897. Showing award of Alaska Boundary Tribunal, October 20, 1903. Scale, 1/960,000.

Yukon—extends from Lynn canal on the south, to Eagle on the north, and from the Pacific to the Frances river. Scale, 1/750,000 or 11.82 miles to 1 inch.

White, Alsek and Klwane Rivers district, southwestern Yukon. Scale, 1/400,000 or 6.31 miles to 1 inch.

Sheet 1 S.W. Ontario (Windsor sheet)—Essex, Kent and Lambton and portions of Elgin, Middlesex and Huron counties. Scale, 1/250,000, or 3.95 miles to 1 inch.

Sheet 1 S.E. Ontario (London sheet)—Norfolk, Oxford, Brant and portions of Elgin, Middlesex, Huron, Perth, Waterloo and Wentworth counties. Scale, 1/250,000, or 3.95 miles to 1 inch.

Sheets 1 N.W. and 1 N.E. Ontario (Guelph sheet)—Wellington, Grey, Bruce and portions of Huron, Perth, Waterloo, Halton, Dufferin and Simcoe counties. Scale, 1/250,000, or 3.95 miles to 1 inch.

Sheet 2 S.W. Ontario (Hamilton sheet)—Lincoln, Welland, Haldimand and portions of Wentworth and Halton counties. Scale, 1/250,000, or 3.95 miles to 1 inch.

Sheet 2 N.W. and 9 S.W. (part) Ontario (Toronto and Muskoka sheet)—Peel, York, Ontario and Victoria and portions of Halton, Simcoe, Dufferin, Muskoka, Parry Sound, Haliburton, Durham and Peterborough counties. Scale, 1/250,000, or 3.95 miles to 1 inch.

Sheet 2 N.E. Ontario (Belleville sheet)—Northumberland and Prince Edward and portions of Durham, Peterborough, Hastings and Lennox and Addington counties. Scale, 1/250,000, or 3.95 miles to 1 inch.

Sheet 9 N.W. (Timiskaming sheet)—includes the country between Lake Nipissing and the Height-of-Land. Scale, 1/250,000, or 3.95 miles to 1 inch.

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Sheet 11 (Montreal and Quebec sheet)—includes the area between Vaudreuil and the Island of Orleans. Scale, 1/500,000, or 7·89 miles to 1 inch.

Sheet 12—includes whole of New Brunswick, with exception of Madawaska and portions of Westmoreland and Albert counties. Scale, 1/500,000, or 7·89 miles to 1 inch.

Sheet 15—Cape Breton Island and portions of Antigonish and Guysborough counties, N.S. Scale, 1/250,000, or 3·95 miles to 1 inch.

Sheet 27, Ontario (Lake of the Woods sheet)—Rainy River district and portions of Thunder Bay district and Keewatin. Scale 1/500,000, or 7·89 miles to 1 inch.

Sheet 28, Ontario (English River sheet)—includes portions of Thunder Bay and Rainy River districts. Scale, 1/500,000, or 7·89 miles to 1 inch.

Sheet 29, Ontario (Lake Nipigon sheet)—includes central portion of Thunder Bay district. Scale, 1/500,000, or 7·89 miles to 1 inch.

MAPS IN PROGRESS.

Sheet 3 N.W. Ontario (Kingston sheet) includes Leeds and Grenville and portions of Hastings, Addington, Renfrew, Frontenac and Lanark counties. Scale, 1/250,000 or 3·95 miles to 1 inch.

Sheet 5 N.W. Nova Scotia (Halifax sheet) includes portions of Halifax, Hants, Kings and Lunenburg counties. Scale, 1/250,000 or 3·95 miles to 1 inch.

Sheets 5 N.E. and 14 S.E. (part) Nova Scotia (Truro sheet) includes Pictou and portions of Guysboro', Halifax and Colchester counties. Scale, 1/250,000 or 3·95 miles to 1 inch.

Sheet 7 N.E. (Sault Ste. Marie sheet) includes part of Algoma district. Scale, 1/250,000, or 3·95 miles to 1 inch.

Sheet 8 N.W. (Sudbury sheet) includes part of Algoma and Nipissing districts. Scale, 1/250,000, or 3·95 miles to 1 inch.

Sheet 8 N.E. (Manitoulin sheet) includes portions of Manitoulin, Algoma and Sudbury districts. Scale, 1/250,000, or 3·95 miles to 1 inch.

Sheet 9 S.E., Ontario and Quebec (Pembroke sheet) includes portions of Hastings, Addington, Renfrew, Haliburton and Nipissing, Ontario, and of Pontiac county, Quebec. Scale, 1/250,000 or 3·95 miles to 1 inch.

Sheet 10 S.E. (Cornwall sheet) includes Dundas, Prescott and Russell counties, Ontario, and Vaudreuil and Soulanges and portions of Argenteuil and Ottawa counties, Quebec. Scale, 1/250,000, or 3·95 miles to 1 inch.

Sheet 10 S.W., Ontario and Quebec (Ottawa sheet) includes portions of Carleton, Lanark, Frontenac and Renfrew counties, Ontario, and of Ottawa and Pontiac counties, Quebec. Scale, 1/250,000, or 3·95 miles to 1 inch.

Sheet 14 S.W. (Moncton sheet) includes portions of Colchester and Cumberland counties, N.S., Albert, Westmoreland and Kent, N.B., and Prince, P.E.I. Scale, 1/250,000, or 3·95 miles to 1 inch.

Sheets 14 N.W., 14 S.W. and 14 S.E. (parts) Prince Edward Island sheet—includes the island and mainland in vicinity. Scale, 1/250,000, or 3·95 miles to 1 inch.

Sheet 30, Ontario (White River sheet) includes portions of Algoma and Thunder Bay districts. Scale, 1/500,000, or 7·89 miles to 1 inch.

Sheet 31, Ontario (Abitibi sheet) includes portions of Algoma and Nipissing districts. Scale, 1/500,000, or 7·89 miles to 1 inch.

Sheet 31 S.E. (Lake Abitibi sheet) includes the surveyed townships in vicinity of Lake Abitibi, Nipissing and Algoma districts. Scale, 1/250,000, or 3·95 miles to 1 inch.

Sheet 41, British Columbia (Prince Rupert sheet) includes portions of the province between longitude 128° W. and 131° W., and between latitude 52° N. and 55° N. Scale, 1/500,000, or 7·89 miles to 1 inch.

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Sheet 42, British Columbia (Babine Lake sheet) includes portion of the province between longitude 125° W. and 128° W., and between latitude 52° N. and 55° N. Scale, 1/500,000, or 7.89 miles to 1 inch.

Sheet 43, British Columbia (Fort George sheet) includes portion of the province between longitude 122° W. and 125° W., and between latitude 52° N. and 55° N. Scale, 1/500,000, or 7.89 miles to 1 inch.

Sheet 44, British Columbia (Tete Jaune Cache sheet) includes portions of the province between longitude 119° W. and 122° W., and between latitude 52° N. and 55° N. Scale, 1/500,000, or 7.89 miles to 1 inch.

Sheet 45, British Columbia (Jasper House sheet) includes portions of the province between longitude 116° W. and 119° W., and between latitude 52° N. and 55° N. Scale, 1/500,000, or 7.89 miles to 1 inch.

Peace River Land District map. Scale, $12\frac{1}{2}$ miles to 1 inch.

Saskatoon Land District map. Scale, $12\frac{1}{2}$ miles to 1 inch.

Rocky Mountains between the Canadian Pacific Railway and the North Saskatchewan. Scale, 4 miles to 1 inch.

Atlas of Canada, 1906. (Out of print.)

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REPORTS.

Altitudes in the Dominion of Canada. With a relief map of North America, 8vo., pp. 226.

Dictionary of altitudes in the Dominion of Canada. With a relief map of Canada, 8vo., pp. 143.

Altitudes in the Dominion of Canada, 2nd edition (in progress).

No. 35.

REPORT OF THE SCHOOL LANDS BRANCH.

DEPARTMENT OF THE INTERIOR,

SCHOOL LANDS BRANCH,

OTTAWA, June 15, 1909.

W. W. CORY, Esq.,

Deputy Minister of the Interior.

Ottawa.

SIR,—I have the honour to submit the following report on the business of the School Lands Branch of the department for the fiscal year ending March 31, 1909.

SALES.

In view of the comparatively poor harvest of the year 1907, and of the financial stringency then prevailing, it was not considered advisable to hold any general auction sales of school lands in the provinces of Manitoba, Saskatchewan and Alberta during the past fiscal year.

At the instance, however, of the government of Alberta, section 29, township 42, range 25 west of the fourth meridian was offered for sale at Ponoka, Alberta, in order to afford them an opportunity of acquiring it in connection with an insane asylum to be erected at that point. The sale was held on April 7, 1908, and the land was sold at \$12 per acre to Mr. L. C. Charlesworth as representing the Minister of Public Works for Alberta.

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An auction sale was also held at Chaplin, Saskatchewan, on November 5, 1908, of the lots in the subdivision of a portion of section 29, township 17, range 5, west of the third meridian, fifty-four lots being disposed of for \$771.

In regard to this I may say that it was found necessary to sub-divide a portion of this section into town lots for the reason that a number of persons had settled on the section and had erected buildings thereon, and it was, therefore, considered advisable to have the land surveyed and subdivided so as to afford those who had made improvements an opportunity of acquiring the lots on which their buildings are situated.

A number of parcels comprising from one to five acres each were also sold during the past fiscal year for school and cemetery purposes. The lands required for school purposes were sold under the amendment to the Dominion Lands Act which provides that portions of school sections required for school sites, not exceeding four acres, may be sold to boards of school trustees at the minimum price of \$10 per acre, provided the application of the trustees is endorsed by the minister or deputy minister of education for the province, and that the parcel selected fronts on a road allowance.

Some forty-three sales were also made to railway companies under the Railway Act, of the lands required in school sections for right of way, station grounds, ballast pit, &c., comprising in all some 350.76 acres, representing the sum of \$6,754.86.

The net revenue from payments on sales during the past fiscal year was as follows:—

Manitoba.....	\$360,999 16
Saskatchewan.....	160,395 91
Alberta.....	128,301 46
Total.....	<u>\$649,696 53</u>

LEASES.

A radical change was made during the year in the manner of renting school lands for grazing purposes.

Heretofore leases have been issued for grazing purposes covering a period of five years subject to a rental of six cents per acre for the school lands in Manitoba, and four cents for those in Saskatchewan and Alberta.

Great difficulty was, however, found in collecting the rental under these leases, the lessees in many instances paying no attention to the notices sent them. The accounts were then placed in the hands of an inspector for collection, but in many cases they were unable to obtain the rental, the lessees either being away from home or not having the money at the time, and as these leases seldom cover more than one section, the amount owing is so inconsiderable that it would hardly be worth while collecting the amount due by process of law, and it is consequently in such cases lost to the fund.

Under these circumstances it was decided that it would be in the interest of the school lands endowment fund to discontinue the issue of grazing leases of school lands, and to substitute for the leases grazing permits. Provision for this was made by order in council of February 22, 1908.

These permits only cover one year, expiring on the 1st of April next following their issue, but they are renewable from year to year at the option of the department, provided that application for the renewal is made each year on or before the 1st February, accompanied by the rental for the next year. Should the permittee not renew his application by the time mentioned, the department is then at liberty to grant the permit to the next applicant after its expiration on the 1st April.

A great saving of time and labour is effected by the change, as no book-keeping is necessary in connection with the permits, and a large amount of correspondence is

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also saved. There can, of course, be no arrears as the permit is not issued until rental is paid for the current year, and it is not renewed again until the rental for the next year is paid.

During the past fiscal year prior to the issue of the grazing permits 160 grazing leases were issued. Since then 291 grazing permits have been issued.

The net revenue from grazing leases and permits for the fiscal year was as follows :—

Manitoba....	\$ 1,125 67
Saskatchewan....	9,103 89
Alberta....	9,552 41

Nine coal leases were issued during the fiscal year, and the revenue from this source was as follows :—

Manitoba....	Nil.
Saskatchewan....	\$ 981 11
Alberta....	3,160 81

Hereto attached are three statements lettered A, B and C, respectively, showing the revenue from all sources collected from school lands in Manitoba, Saskatchewan and Alberta during the fiscal year. From this it will be seen that the total net revenue for that period was as follows :—

Manitoba....	\$365,430 16
Saskatchewan....	172,754 90
Alberta....	143,440 40
Total....	<u>\$681,625 46</u>

Statement D shows the revenue collected through the Dominion lands agencies.

Of the total net revenue of \$681,625.46, the sum of \$38,639.59 was collected through the Dominion lands agencies, and the balance of \$642,985.87 at head office.

The expenditure for the fiscal year was as follows :—

Manitoba....	\$ 6,872 13
Saskatchewan....	6,947 00
Alberta....	6,840 60
Total....	<u>\$20,659 73</u>

As the net revenue for the fiscal year was \$681,625.46, the expenditure was as nearly as possible 3 per cent of the revenue, which, I submit, is a very moderate amount for the administration of the school lands in the three provinces.

Statements E, F and G are hereto attached showing the revenue and expenditure on account of the school lands fund for the fiscal year, and also the balance standing to the credit of each of the school lands funds on March 31, 1909. From this it will be seen that the balance to the credit of the Manitoba School Lands Fund on March 31 was \$2,185,211.69; the Saskatchewan School Lands Fund, \$850,398.41, and the Alberta School Lands Fund, \$452,123.39.

In accordance with orders in council in that regard, cheques were issued in favour of the provincial treasurer of each of the provinces of Manitoba, Saskatchewan and Alberta covering the revenue collected from school lands during the last fiscal year other than principal moneys of sales after deducting the cost of management. The amount so paid over to each province was as follows :—

Manitoba....	\$108,895 41
Saskatchewan....	52,113 24
Alberta....	54,239 84

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There is a slight decrease in the gross revenue for the current year as compared with the previous year, namely, \$688,466.51, as against \$704,963.33.

This is due to the fact that there were no general auction sales held during the past fiscal year. The work of the branch has, however, greatly increased in other respects.

I may say that prior to the close of the fiscal year steps were taken for the inspection and valuation of a large number of school lands in Manitoba and Alberta with a view to holding auction sales in these provinces during the present year, and from present indications it is likely that the sales will be very successful.

The following is a statement of the clerical work of the branch for the past fiscal year—

Letters received and registered.. . . .	10,042
Letters and telegrams sent.. . . .	16,045
Leases and grazing permits issued.. . . .	460
Cultivation permits issued.. . . .	30
Receipts issued.. . . .	2,970
Accounts.. . . .	6,178
Assignments registered.. . . .	205

Respectfully submitted,

FRANK S. CHECKLEY,
Chief of Branch.

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A.—MANITOBA SCHOOL LANDS.

STATEMENT of Revenue collected from School Lands for the Fiscal Year, from April 1, 1908, to March 31, 1909,
both dates inclusive.

Month.	SALES.		Total.	Cultivation Permits.		Grazing.		Timber.		Hay.		Registration Fees.		Total.
	Principal.	Interest.		\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	
1908.														
April.....	1,843 68	2,242 00	4,085 68	5 50	62 07	40 00								4,193 25
May.....	4,353 82	4,302 65	8,656 47	10 00	51 20									8,717 67
June.....	17,217 42	11,798 93	29,016 35	4 00	113 42	3 00								29,136 77
July.....	11,650 55	7,421 63	19,072 18		112 50			125 00						19,309 68
August.....	2,610 96	1,216 41	3,827 37		13 92									3,841 29
September.....	957 76	918 46	1,876 22		28 85									1,905 07
October.....	30,885 34	10,225 60	41,120 94	5 50	59 10	33 00								41,218 54
November.....	95,261 12	33,611 31	128,872 43	50 00	48 00									128,970 43
December.....	40,269 35	20,447 72	60,717 07	6 00	28 80									60,751 87
1909.														
January.....	23,513 58	6,442 06	29,955 64	73 80	111 25									27,140 69
February.....	8,955 45	3,236 45	12,191 90	25 50	8 21	6 55								12,232 16
March.....	9,763 85	5,812 21	15,576 06	18 50	54 60									15,651 16
Total.....	244,294 88	107,675 43	351,970 31	198 80	601 92	43 00		164 55						353,068 58
Agencies.....	5,776 27	3,567 16	9,443 43	12 50	591 75	1,254 48		1,890 35						13,132 51
Registration fees.....	250,071 15	111,342 59	361,413 74	211 30	1,283 67	2,014 90		2,014 90		1,297 48		204 50		366,221 69
Transfer of fees to Dominion Lands.....	250,071 15	111,342 59	361,413 74	211 30	1,283 67	2,014 90		2,014 90		1,297 48		204 50		366,425 59
Am't. Dep. C.N.R., per bank receipt No. 420 of Nov. 26, 1908.....	256,071 15	111,342 59	367,413 74	211 30	1,283 67	2,014 90		2,014 90		1,297 48		204 50		368,713 50
Refunds.....	408 91	6 05	414 96											414 96
Total.....	240,682 62	111,336 54	352,019 16	211 30	1,125 67	1,014 13		1,875 40		1,028 48		204 50		355,430 16

FRANK S. CHECKLEY,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
SCHOOL LANDS BRANCH,
OTTAWA, June 10, 1909.

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B.—SASKATCHEWAN SCHOOL LANDS.

STATEMENT of Revenue collected from School Lands for the Fiscal Year from April 1, 1908, to March 31, 1909, both dates inclusive.

Month.	SALES.		Total.	Cultiva- tion Permits.	Grazing Permits.	Timber.	Hay.	Coal.	Sand.	Registra- tion Fees.	Total.
	Principal.	Interest.									
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1908.											
April.....	9,740 22	1,474 97	11,215 19	12 00	483 45	.....	40 00	.....	.....	.....	11,750 44
May.....	3,429 58	1,651 55	4,081 14	10 50	392 28	.....	8 50	498 57	.....	.....	4,980 39
June.....	4,349 20	1,464 83	5,814 03	33 12	730 32	.....	.....	.....	.....	.....	6,577 49
July.....	1,069 78	1,352 14	2,421 92	.....	437 05	.....	16 00	.....	.....	.....	2,864 97
August.....	2,139 78	639 34	2,779 12	.....	525 93	.....	.....	.....	.....	.....	3,295 05
September.....	1,335 16	469 57	1,804 73	12 50	187 14	.....	1 00	.....	.....	.....	2,004 37
October.....	15,971 27	4,956 50	20,927 77	63 50	528 05	.....	.....	240 59	.....	.....	21,529 32
November.....	33,296 35	14,449 26	47,685 61	.....	172 64	.....	.....	.....	.....	.....	48,098 74
December.....	12,876 09	10,455 13	23,331 22	.....	228 80	.....	.....	.....	.....	.....	23,660 02
1909.											
January.....	10,756 78	3,772 74	14,529 47	.....	277 85	.....	.....	.....	.....	.....	14,806 82
February.....	6,508 67	2,051 68	8,560 35	35 50	800 20	.....	2 00	.....	.....	.....	9,398 05
March.....	10,556 00	2,823 74	13,379 74	10 00	782 97	.....	.....	.....	.....	.....	14,172 71
Total.....	111,988 83	44,552 48	156,521 31	117 12	5,536 08	.....	67 50	739 16	.....	.....	163,041 17
Agencies.....	1,765 32	2,148 77	3,914 09	10 00	3,455 05	.....	2,361 70	241 95	28 15	.....	10,345 29
Registration fees.....	113,734 15	46,701 25	160,435 40	187 12	9,191 73	.....	2,429 20	981 11	28 15	.....	173,886 46
Transfer fees to Dominion Lands.....	113,734 15	46,701 25	160,435 40	187 12	9,191 73	.....	2,429 20	981 11	28 15	.....	173,886 46
Refunds.....	39 49	.....	39 49	15 50	87 84	.....	89 23	.....	.....	.....	252 06
	113,694 65	46,701 25	160,395 91	171 62	9,103 89	.....	1,856 97	981 11	28 15	.....	172,764 90

DEPARTMENT OF THE INTERIOR,
SCHOOL LANDS BRANCH,
OTTAWA, June 10, 1909.

FRANK S. CHECKLEY,
Chief of Branch.

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C.—ALBERTA SCHOOL LANDS.

STATEMENT of Revenue collected from School Lands for the Fiscal Year from April 1, 1908, to March 31, 1909, both dates inclusive.

Months.	SALES.		Total.	Cultivation Permits.	Grazing Permits.		Timber.	Hay.		Coal.		Registration Fees.	Total.
	Principal.	Interest.			\$	cts.		\$	cts.	\$	cts.		
1908.													
April	1,155 57	882 53	2,038 10		401 16					216 00			2,655 26
May	602 35	434 30	1,036 65		283 07					132 00			1,451 72
June	1,166 38	1,130 53	2,296 91		563 95					220 00			3,080 86
July	2,443 50	1,432 51	3,876 01		340 00					226 30			4,432 31
August	2,743 26	703 49	3,447 75		464 45		12 25			58 00			4,012 45
September	1,720 98	1,102 21	2,823 19		159 75		30 00			192 00			3,264 94
October	3,653 35	3,653 35	13,300 91		213 56					53 00			13,967 47
November	99,879 46	19,709 28	49,588 74		370 87					168 15			50,137 76
December	14,113 07	8,190 68	22,303 75	3 25	205 00					192 00			22,704 00
1909.													
January	7,786 82	2,574 11	10,360 93		488 33					170 00			11,019 26
February	4,636 99	2,042 06	6,669 05		657 88					84 00			7,410 93
March	5,701 77	2,131 61	7,833 38	13 80	704 13					985 90			9,537 21
Total	81,618 71	44,046 66	125,665 37	17 05	4,852 15		42 25			2,697 35			133,274 17
Agencies.	4,910 83	1,894 84	6,805 67		4,732 59		1,358 27			1,133 46			15,141 79
Registration fees	86,529 54	45,941 50	132,471 04	17 05	9,604 74		1,400 52			3,830 81		143 00	148,415 96
Transfer fees to Dominion Lands.	86,529 54	45,941 50	132,471 04	17 05	9,604 74		1,400 52			3,830 81		143 00	148,508 96
Refunds.	4,169 58	45,941 50	132,471 04	17 05	9,604 74		1,374 37			900 30		143 00	148,341 31
			4,169 58		52 83					670 00			4,900 91
	82,359 96	45,941 50	128,301 46	17 05	9,552 41		1,374 37			3,160 81		143 00	143,440 40

FRANK S. CHECKLEY,
Chief of Branch.DEPARTMENT OF THE INTERIOR,
SCHOOL LANDS BRANCH,
OTTAWA, June 10, 1909.

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D.—SCHOOL Lands Revenue, collected through Dominion Lands Agencies, during the Fiscal Year ending March 31, 1909.

Agencies.	SALES.		Total.	Cultivation.	Grazing.	Timber.	Hay.	Coal.	Sand.	Total.
	Principal.	Interest.								
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Winnipeg.....	1,884 70	1,714 23	3,598 93	12 50	135 80	1,641 35	844 38	.....	.....	6,232 96
Brandon.....	3,639 24	1,700 04	5,339 28	.....	461 21	6 50	274 70	.....	.....	6,081 69
Dauphin.....	252 33	252 89	505 22	.....	177 80	202 50	243 20	.....	.....	1,128 72
Estevan.....	.....	50 40	50 40	.....	475 20	.....	390 20	226 95	.....	1,142 75
Regina.....	1,255 67	885 10	2,140 77	.....	781 71	87 00	556 10	.....	28 15	3,593 73
Yorkton.....	509 65	1,213 27	1,722 92	.....	204 80	.....	279 30	.....	.....	2,297 02
Prince Albert..	.....	.....	.....	10 00	411 95	39 00	395 90	.....	.....	857 85
Battleford.....	.....	.....	.....	.....	333 62	5 00	192 80	10 00	.....	591 42
Humboldt.....	.....	.....	.....	.....	563 82	25	184 80	.....	.....	748 87
Moosejaw.....	.....	.....	.....	.....	651 49	2 50	253 80	5 00	.....	912 79
Lethbridge.....	.....	.....	.....	.....	2,289 01	43 94	69 60	532 61	.....	2,935 16
Calgary.....	3,022 83	1,836 84	4,859 67	.....	1,711 28	.....	301 10	96 00	.....	6,968 05
Red Deer.....	1,888 00	58 00	1,926 00	.....	452 38	17 00	289 55	287 25	.....	2,992 18
Edmonton.....	.....	.....	.....	.....	299 92	1,297 33	431 55	217 60	.....	2,246 40
	12,432 42	7,710 77	20,163 19	22 50	8,999 99	3,342 37	4,707 98	1,375 41	28 15	38,639 59

FRANK S. CHECKLEY,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
SCHOOL LANDS BRANCH,
OTTAWA, June 10, 1909.

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E.—MANITOBA SCHOOL LANDS.

STATEMENT of Revenue and Expenditure on account of Manitoba School Lands for the Fiscal Year ended March 31, 1909.

Particulars.	Period.	Dr.		Cr.	
		\$	cts.	\$	cts.
By balance on April 1, 1908.....				1,935,791	84
" sales.....	12 months.....			360,999	16
" cultivation permits.....	".....			211	30
" timber dues, hay permits and grazing rentals.....	March 31, 1909.....			4,015	20
" registration fees.....				204	50
" interest on fund.....	12 months to March 31, 1909..			62,161	11
To cost of management at Ottawa.....	" "	3,226	30		
" salaries, printing, advertising and general expenses.....	" "	3,645	83		
" amount over-credited on account of interest during period ended June 30, 1907.....			242	77	
" revenue and interest paid to the Manitoba Government.....	12 months to March 31, 1909.....	108,895	41		
" interest on fund paid to the Manitoba Government.....	" "	62,161	11		
" balance on March 31, 1909.....		2,185,211	69		
		2,363,383	11	2,363,383	11

FRANK S. CHECKLEY,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
SCHOOL LANDS BRANCH,
OTTAWA, June 10, 1909.

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F.—SASKATCHEWAN SCHOOL LANDS.

STATEMENT of Revenue and Expenditure on account of Saskatchewan School Lands
for the Fiscal Year ended March 31, 1909.

Particulars.	Period.	Dr.	Cr.
		\$ cts.	\$ cts.
By balance on April 1, 1908.			736,703 75
" sales	12 months to March 31, 1909		160,395 91
" cultivation permits	" "		171 62
" timber dues, hay permits, grazing, coal, &c.	" "		12,091 87
" registration fees	" "		95 50
" interest on fund	" "		24,289 14
To cost of management at Ottawa	" "	3,226 29	
" salaries, printing, advertising and general expenses	" "	3,720 71	
" revenue and interest paid to Sas- katchewan Government	" "	52,113 24	
" interest on fund paid to Saskatchewan Government	" "	24,289 14	
" Balance on March 31, 1909	" "	850,398 41	
		933,747 79	933,747 79

FRANK S. CHECKLEY,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
SCHOOL LANDS BRANCH,
OTTAWA, June 10, 1909.

G.—ALBERTA SCHOOL LANDS.

STATEMENT of Revenue and Expenditure on account of Alberta School Lands for
the Fiscal Year ended March 31, 1909.

Particulars.	Period.	Dr.	Cr.
		\$ cts.	\$ cts.
By balance on April 1, 1908.			369,763 43
" sales	12 months ended March 31, 1909		128,301 46
" cultivation permits	" "		17 05
" timber dues, hay permits, grazing and coal	" "		14,978 89
" registration fees	" "		143 00
" interest on fund	" "		12,790 09
To cost of management at Ottawa	" "	3,226 29	
" salaries, printing, advertising and general expenses	" "	3,614 31	
" revenue and interest paid to Alberta Government	" "	54,239 84	
" interest on fund paid to Alberta Government	" "	12,790 09	
" Balance on March 31, 1909	" "	452,123 39	
		525,993 92	525,993 92

FRANK S. CHECKLEY,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
SCHOOL LANDS BRANCH,
OTTAWA, June 10, 1909.

PART II

IMMIGRATION

IMMIGRATION

REPORT OF THE SUPERINTENDENT OF IMMIGRATION.

DEPARTMENT OF THE INTERIOR,

OTTAWA, May 3, 1909.

W. W. CORY, Esq.,

Deputy Minister of the Interior,

Ottawa.

SIR,—I have the honour to submit herewith the annual reports of the principal officers engaged in the immigration service in Canada and abroad, having reference to the fiscal year ending March 31, 1909, and at the same time to draw attention to the following statistical tables compiled in my office:—

IMMIGRANT ARRIVALS.

SUMMARY for the fiscal Year 1908-9.

Per ocean travel—			
Quebec.....		44,070	
St. John.....		13,601	
Halifax.....		13,379	
North Sydney.....		2,390	
Vancouver.....		1,517	
Victoria.....		1,302	
New York.....	8,458		
Portland.....	1,615		
Boston.....	675		
Philadelphia.....	40		
Baltimore.....	29	10,817	87,076
From the United States (direct).....			59,832
Total.....			146,908

COMPARATIVE STATEMENT.

TOTAL Immigrants arriving for Canada by months, for the fiscal year ending March 31, 1909, and for the fiscal year ending March 31, 1908.

	FISCAL YEAR 1907-8.				FISCAL YEAR 1908-9.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
April.....	30,103	7,155	6,793	44,051	19,311	5,342	5,100	29,753
May.....	28,493	8,675	8,509	45,677	13,168	5,418	4,998	23,584
June.....	20,913	8,450	8,280	37,643	7,800	4,439	3,397	15,636
July.....	14,601	6,150	5,590	26,341	5,611	3,191	2,528	11,330
August.....	10,744	5,508	4,760	21,012	5,062	2,765	2,255	10,082
September.....	10,039	5,074	3,944	19,057	5,367	2,829	1,896	10,092
October.....	9,374	4,779	4,090	18,243	4,218	2,640	2,201	9,059
November.....	7,516	3,583	3,166	14,265	3,359	1,924	1,747	7,030
December.....	5,513	1,899	1,624	9,036	2,670	1,215	1,075	4,960
January.....	3,174	1,274	1,119	5,567	2,247	976	874	4,097
February.....	3,609	1,434	1,121	6,164	2,963	1,033	795	4,791
March.....	9,749	2,931	2,733	15,413	10,359	3,011	3,094	16,464
Totals.....	153,828	56,912	51,729	262,469	82,165	34,783	29,960	146,908

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COMPARATIVE STATEMENT.

TOTAL Immigrants arriving for Canada, by ports, for the fiscal year ending March 31, 1909, and for the fiscal year ending March 31, 1908.

	FISCAL YEAR 1907-8.				FISCAL YEAR 1908-9.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
North Sydney.	2,726	618	378	3,722	1,822	469	159	2,390
Halifax.	17,857	5,514	4,948	28,319	7,839	2,916	2,624	13,379
St. John.	11,913	3,454	2,527	17,894	8,855	2,743	2,003	13,601
Quebec.	57,218	28,708	26,398	112,324	18,452	14,446	11,172	44,070
Vancouver.	6,218	208	140	6,566	1,293	103	121	1,517
Victoria.	5,401	487	136	6,024	1,003	181	118	1,302
Via United States ports, (New York, Portland, Boston, Baltimore and Phil- adelphia).	20,960	4,552	3,796	29,308	7,073	2,100	1,644	10,817
From the United States.	31,535	13,371	13,406	58,312	35,828	11,885	12,119	59,832
Totals.	153,828	56,912	51,729	262,469	82,165	34,783	29,960	146,908

COMPARATIVE STATEMENT.

TOTAL Immigrants arriving from the United States, direct, by months, for the fiscal year ending March 31, 1909, and for the fiscal year ending March 31, 1908.

	FISCAL YEAR 1907-8.				FISCAL YEAR 1908-9.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
April.	5,131	2,103	2,379	9,613	5,676	1,531	1,877	9,084
May.	3,749	1,522	1,651	6,922	3,923	1,209	1,307	6,439
June.	2,806	1,279	1,239	5,324	2,876	1,047	961	4,884
July.	2,760	1,455	1,180	5,395	2,684	1,003	792	4,479
August.	2,160	1,077	839	4,076	3,027	907	750	4,684
September.	1,954	1,019	880	3,853	2,965	971	753	4,689
October.	2,435	1,139	1,072	4,646	2,582	1,030	973	4,585
November.	2,140	951	1,065	4,156	2,145	889	994	4,028
December.	1,627	615	695	2,937	1,655	597	610	2,862
January.	1,542	606	614	2,762	1,317	480	499	2,296
February.	1,446	525	495	2,466	1,566	542	512	2,620
March.	3,785	1,080	1,297	6,162	5,412	1,679	2,091	9,182
Totals.	31,535	13,371	13,406	58,312	35,828	11,885	12,119	59,832

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COMPARATIVE STATEMENT.

IMMIGRANTS arriving for Canada, by nationalities, for the fiscal year 1908-9, and for the fiscal year 1907-8, showing increase or decrease of each nationality.

	Fiscal Year, 1907-8.	Fiscal Year, 1908-9.	Increase.	Decrease.
English.....	90,380	37,019		53,361
Welsh.....	1,032	463		569
Scotch.....	22,223	11,810		10,413
Irish.....	6,547	3,609		2,938
Total British.....	120,182	52,901		67,281
African, South.....	76	53		23
Australian.....	180	171		9
Austrian, N.E.S.....	1,899	1,830		69
Bohemian.....	102	28		74
Bukowinian.....	2,145	1,546		599
Croatian.....	224	1		223
Dalmatian.....	10	1		9
Galician.....	14,268	6,644		7,624
Hungarian, N.E.S.....	1,507	595		712
Magyar.....	321	4		317
Ruthenian.....	912	149		763
Slovak.....	188			188
Belgian.....	1,214	828		386
Bulgarian.....	2,529	56		2,473
Brazilian.....	1	4	3	
Chinese.....	1,884	1,887	3	
Dutch.....	1,212	495		717
French.....	2,671	1,830		841
German, N.E.S.....	2,363	1,257		1,106
Alsatian.....	2	1		1
Bavarian.....	7			7
Prussian.....	5	74	69	
Saxon.....		8	8	
West Indian.....	134	113		21
Bermudian.....	43	14		29
Jamaican.....	101	32		69
Greek.....	1,053	192		861
Hebrew, N.E.S.....	1,679	151		1,528
" Russian.....	5,738	1,444		4,294
" Polish.....	46	2		44
" Austrian.....	195	24		171
" German.....	54	15		39
Italian.....	11,212	4,228		6,984
Japanese.....	7,601	495		7,106
Newfoundland.....	3,374	2,108		1,266
New Zealand.....	70	65		5
Portuguese.....	2	2		
Polish, N.E.S.....	255	76		179
" Austrian.....	586	42		544
" German.....	16	3		13
" Russian.....	736	255		481
Persian.....	7	1		6
Roumanian.....	949	278		671
Russian, N.E.S.....	6,281	3,547		2,734
Finnish.....	1,212	669		543
Spanish.....	61	32		29
Swiss.....	195	129		66
Servian.....	48	31		17
Danish.....	290	160		130
Icelandic.....	97	35		62
Swedish.....	2,132	1,135		997
Norwegian.....	1,554	752		802
Turkish.....	489	296		253
Armenian.....	563	79		484
Egyptian.....	8	2		6
Syrian.....	732	189		543
Arabian.....	50	4		46
U.S.A. Citizens (through ocean ports).....	133	94		39
Negro.....	136	73		63
Hindoo.....	2,623	6		2,617
Total Continental, &c.....	83,975	34,175		49,800
United States (direct).....	58,312	59,832	1,520	
Total Immigration.....	262,469	146,908		115,561

ARRIVALS AT OCEAN PORTS.

For the fiscal year 1908-9, there arrived, via Canadian and United States ocean ports 145,431 passengers, of whom 14,588 travelled saloon and 130,843 steerage. Of the saloon passengers, 11,916 were destined to Canada and 2,672 to the United States. Of the steerage passengers, 113,452 were for Canada and 17,391 for the United States. Included in the steerage passengers for Canada were 21,501 returned Canadians and 4,875 tourists, leaving the immigration proper via ocean ports at 87,076 souls, which together with the 59,832 settlers direct from the United States, brings the total immigration to 146,908, a decrease as compared with the preceding fiscal year of 115,561 persons.

The following further statistical information will be of interest :—Table I. deals with the total arrivals of saloon passengers, Table II. with the total arrivals of steerage passengers, Table III. with the monthly arrivals of immigrants for Canada, and Tables IV. and V. give summaries of the information obtained from immigrants for Canada upon arrival.

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TABLE I.

NATIONALITY and Sex of Saloon Passengers arriving at Ocean Ports, for the Fiscal Year ending March 31, 1909.

	CANADA.				UNITED STATES.				CANADA AND UNITED STATES.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
African, South.....	1	1	1	3	2			2	3	1	1	5
Australian.....	79	92	22	193	25	17	5	47	104	109	27	240
Austrian.....	13			13	1	1		2	14	1		15
Belgian.....	7	4		11	2			2	9	4		13
Chinese.....	12	1	5	18	6	3		9	18	4	5	27
Dutch.....	13	4		17	1			1	14	4		18
French.....	132	93	20	245	17	12	5	34	149	105	25	279
German.....	38	13		51	17	9		26	55	22		77
English.....	2,246	1,229	188	3,663	135	56	10	201	2,381	1,285	198	3,864
Welsh.....	38	15		53	4	1		5	42	16		58
Scotch.....	529	302	42	873	58	34		92	587	336	42	965
Irish.....	117	71	8	196	9	10		19	126	81	8	215
West Indian.....	48	55	25	128	9	5	1	15	57	60	26	143
Bermudian.....	2	5	1	8					2	5	1	8
Jamaican.....	5			5	1			1	6			6
Greek.....	1			1					1			1
Italian.....	17	1		18	1	2		3	18	3		21
Japanese.....	23	6	3	32	5	5	2	12	28	11	5	44
Newfoundland.....	312	267	21	540	113	116	3	234	427	323	24	774
New Zealand.....	41	37	4	82	9	4		13	50	41	4	95
Portuguese.....	3	1		4					3	1		4
Russian.....	7	2		9	2	2		4	9	4		13
Finnish.....					1			1	1			1
Spanish.....	7	1		8	2			2	9	1		10
Swiss.....	6	1	1	8	1			1	7	1	1	9
Danish.....	2	1	3	6	2			2	4	1	3	8
Swedish.....	10	4		14	5			5	15	4		19
Norwegian.....	1	4		5	1	1		2	2	5		7
Armenian.....					1	1		2	1	1		2
Egyptian.....	2			2					2			2
Syrian.....	3			3	2			2	5			5
U.S.A. citizens..	139	72	16	227	937	837	105	1,879	1,076	909	121	2,106
Negro.....	2	1		3					2	1		3
Hindoo.....	2			2					2			2
Canadian.....	2,279	1,642	317	4,238	17	3	3	23	2,296	1,645	320	4,261
Tourist.....	687	466	84	1,237	16	12	3	31	703	478	87	1,268
Totals.....	6,824	4,331	761	11,916	1,404	1,131	137	2,672	8,228	5,463	898	14,588

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TABLE II.

NATIONALITY and Sex of Steerage Passengers arriving at Ocean Ports, for the Fiscal Year ending March 31, 1909.

	CANADA.				UNITED STATES.				CANADA AND UNITED STATES.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
African, South...	21	18	14	53	4	2	13	19	25	20	27	72
Australian...	86	48	37	171	81	73	37	191	167	121	74	362
Austrian, N.E.S.	1,225	316	289	1,830	185	83	33	301	1,410	399	322	2,131
Bohemian...	7	14	7	28	7	2	...	9	14	16	7	37
Bukowinian...	1,353	101	92	1,546	3	1	...	4	1,356	102	92	1,550
Croatian...	1	...	...	1	5	...	...	5	6	...	...	6
Dalmatian...	...	1	...	1	...	...	...	...	...	1	...	1
Galician...	4,657	992	995	6,644	21	28	17	66	4,678	1,020	1,012	6,710
Hungarian, N.E.S.	393	107	95	595	42	44	34	120	435	151	129	715
Magyar...	...	1	3	4	...	...	...	...	...	1	3	4
Ruthenian...	127	9	13	149	...	...	...	...	127	9	13	149
Belgian...	401	210	217	828	40	19	26	85	441	229	243	913
Bulgarian...	52	4	...	56	12	5	3	20	64	9	3	76
Brazilian...	...	...	4	4	...	...	...	...	...	...	4	4
Chinese...	1,695	36	156	1,887	130	4	2	136	1,825	40	158	2,023
Dutch...	227	135	133	495	35	19	19	73	262	154	152	568
French...	1,143	460	227	1,830	47	34	18	99	1,190	494	245	1,929
German, N.E.S.	588	326	343	1,257	186	133	106	425	774	459	449	1,682
Alsatian...	1	...	...	1	...	...	...	...	1	...	...	1
Prussian...	22	15	37	74	1	1	3	5	23	16	40	79
Saxon...	...	1	7	8	...	...	...	...	...	1	7	9
English...	16,512	11,336	9,171	37,019	938	670	381	1,989	17,450	12,006	9,552	39,008
Welsh...	231	132	100	463	39	22	12	73	270	154	112	536
Scotch...	5,342	3,959	2,509	11,810	312	206	112	630	5,654	4,165	2,621	12,440
Irish...	1,733	1,278	598	3,609	173	98	30	291	1,896	1,376	628	3,900
West Indian...	58	48	7	113	16	7	3	26	74	55	10	139
Bermudian...	4	8	2	14	...	...	...	...	4	8	2	14
Jamaican...	20	12	...	32	...	...	...	...	20	12	...	32
Greek...	165	13	14	192	78	...	6	84	243	13	20	276
Hebrew, N.E.S.	55	46	50	151	24	13	23	60	79	59	73	211
" Russian...	460	486	498	1,444	28	31	39	98	488	517	537	1,542
" Polish...	2	...	...	2	...	...	...	...	2	...	...	2
" Austrian...	9	6	9	21	...	...	...	...	9	6	9	24
" German...	6	5	4	15	...	...	...	...	6	5	4	15
Italian...	3,567	394	267	4,228	31	7	6	44	3,598	401	273	4,272
Japanese...	312	153	30	495	31	20	...	51	343	173	30	546
Newfoundland...	1,605	374	129	2,108	537	372	33	942	2,142	746	162	3,050
New Zealand...	36	17	12	65	32	12	4	48	68	29	16	113
Portuguese...	1	1	...	2	7	...	...	7	8	1	...	9
Polish, N.E.S.	50	15	11	76	23	14	7	44	73	29	18	120
" Austrian...	40	1	1	42	2	...	...	2	42	1	1	44
" German...	3	...	...	3	...	...	...	...	3	...	...	3
" Russian...	127	62	66	255	4	10	9	23	131	72	75	278
Persian...	1	...	...	1	...	...	...	...	1	...	...	1
Romanian...	114	82	82	278	14	12	9	35	128	94	91	313
Russian, N.E.S.	1,672	815	1,060	3,547	577	460	507	1,544	2,249	1,275	1,567	5,091
Finnish...	428	158	83	669	1,579	402	242	2,223	2,007	560	325	2,892
Spanish...	24	3	5	32	4	1	...	5	28	4	5	37
Swiss...	87	27	15	129	16	18	10	44	103	45	25	173
Servian...	6	5	20	31	9	5	5	19	15	10	25	50
Danish...	106	44	10	160	161	69	54	284	267	113	64	444
Icelandic...	17	13	5	35	...	1	...	1	17	14	5	36
Swedish...	633	291	211	1,135	558	287	147	992	1,191	578	358	2,127
Norwegian...	432	181	139	752	977	549	264	1,790	1,409	730	403	2,542
Turkish...	202	21	13	236	33	5	5	43	235	26	18	279
Armenian...	44	23	12	79	78	31	23	132	122	51	35	211
Egyptian...	2	...	...	2	2	...	...	2	4	...	...	4
Syrian...	120	41	28	189	22	10	6	38	142	51	34	227
Arabian...	2	2	...	4	...	...	...	...	2	2	...	4
U.S.A. citizens...	56	29	9	94	1,263	1,079	292	2,634	1,319	1,108	301	2,728
Negro...	49	22	...	73	...	...	...	...	49	22	...	73
Hindoo...	5	1	...	6	2	...	...	2	7	1	...	8
Total immigration.	46,337	22,898	17,841	87,076	8,360	4,859	2,540	15,759	54,697	27,757	20,381	102,835
Returned Canadian	15,320	4,438	1,743	21,501	...	...	...	...	15,320	4,438	1,743	21,501
Tourist	3,412	1,279	184	4,875	1,283	258	91	1,632	4,095	1,537	275	6,907
Totals	65,069	28,615	19,768	113,452	9,643	5,117	2,631	17,391	74,712	33,732	22,399	130,843

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TABLE III.

MONTHLY arrivals of Immigrants, for Cana'a, at Ocean Ports, for the Fiscal Year ending March 31, 1909.

—	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Totals
African, South....	3	4	2	5	2	13	8	2	4	7	3	.....	53
Australian.....	9	18	48	16	10	13	8	11	7	9	5	17	171
Austrian, N.E.S. .	591	224	223	77	60	96	109	118	54	55	77	146	1,830
Bohemian.....	7	2	5	2	7	.....	1	1	.....	1	.....	2	28
Bukowinian.....	969	415	103	11	3	13	.....	6	.....	1	1	24	1,546
Croatian.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Dalmatian.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Galician.....	3,277	2,080	774	58	106	51	31	55	15	61	20	116	6,644
Hungarian, N.E.S.	105	44	48	37	19	23	35	29	45	55	52	103	595
Magyar.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
Ruthenian.....	122	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	149
Belgian.....	184	170	65	42	38	50	46	17	23	50	31	112	828
Bulgarian.....	2	30	5	.....	11	2	.....	2	1	.....	.....	3	56
Brazilian.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	4
Chinese.....	199	445	154	418	197	133	86	80	58	44	22	51	1,887
Dutch.....	102	76	41	36	22	44	21	11	19	4	7	112	495
French.....	270	406	196	169	141	163	144	71	50	34	42	144	1,830
German, N.E.S. .	282	162	141	97	87	83	100	67	32	53	45	108	1,237
Alsatian.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Prussian.....	22	1	.....	.....	3	1	.....	.....	47	.....	.....	.....	74
Saxon.....	.....	.....	.....	.....	.....	8	.....	.....	.....	.....	.....	.....	8
English.....	8,360	7,616	4,515	3,373	2,606	2,221	2,149	1,125	664	538	747	3,105	37,019
Welsh.....	98	67	49	38	38	48	33	31	11	5	5	40	493
Scotch.....	2,257	2,044	2,338	905	742	1,059	608	297	250	186	216	908	11,810
Irish.....	669	634	510	358	322	327	204	131	86	41	53	274	3,609
West Indian.....	6	24	16	13	13	23	3	2	3	2	2	6	113
Bernaduan.....	3	.....	.....	2	2	.....	3	1	.....	.....	1	2	14
Jamaican.....	3	1	8	4	.....	3	9	2	.....	.....	.....	2	32
Greek.....	44	12	11	16	27	6	1	3	16	3	7	46	192
Hebrew, N.E.S. .	22	23	25	11	19	.....	2	12	8	23	6	.....	151
" Russian..	187	151	169	193	131	156	69	89	80	67	75	77	1,444
" Polish..	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	2
" Austrian.	11	6	2	.....	.....	4	.....	1	.....	.....	.....	.....	24
" German..	2	4	.....	.....	.....	.....	.....	7	.....	.....	.....	.....	15
Italian.....	1,237	1,006	199	84	111	115	126	112	118	83	275	763	4,228
Japanese.....	152	113	51	39	27	21	31	12	16	11	13	9	495
Newfoundland....	303	307	183	113	193	222	177	218	83	63	37	209	2,108
New Zealand.....	11	6	23	4	4	2	1	6	.....	1	3	4	65
Portuguese.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Polish, N.E.S. .	2	6	23	2	2	14	5	1	1	.....	11	9	76
" Austrian..	35	3	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	42
" German..	.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	3
" Russian..	33	44	69	25	21	4	7	10	.....	23	.....	19	255
Persian.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
Roumanian.....	50	43	31	34	4	12	20	15	26	3	10	30	278
Russian, N.E.S. .	654	510	381	333	157	192	172	312	161	198	162	315	3,547
Finnish.....	29	29	28	44	39	41	53	50	89	86	86	95	669
Spanish.....	5	.....	2	7	2	4	9	1	.....	2	.....	.....	32
Swiss.....	8	28	12	11	6	16	12	4	3	4	.....	25	129
Servian.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	29	31
Danish.....	35	25	13	14	8	7	8	6	5	4	11	24	160
Icelandic.....	5	2	10	3	2	.....	8	.....	3	.....	.....	1	35
Swedish.....	116	192	120	123	84	106	83	41	50	25	67	128	1,135
Norwegian.....	93	77	86	64	64	82	58	21	23	21	34	129	752
Turkish.....	5	38	6	6	1	9	31	17	11	13	27	72	236
Armenian.....	25	2	5	16	.....	1	5	2	13	1	1	8	79
Egyptian.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	2
Syrian.....	11	6	30	33	37	10	15	1	14	18	10	4	189
Arabian.....	.....	.....	.....	.....	1	.....	1	1	1	.....	.....	.....	4
U.S.A. citizens....	12	15	10	11	18	4	1	1	5	4	6	7	94
Negro.....	34	2	20	.....	5	1	10	.....	1	.....	.....	.....	73
Hindoo.....	.....	2	2	1	.....	.....	1	.....	.....	.....	.....	.....	6
Totals.....	20,669	17,145	10,752	6,851	5,398	5,403	4,504	3,002	2,098	1,801	2,171	7,282	87,076

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TABLE IV.

MONTHLY arrivals of Immigrants for Canada, by Occupation and Destination at Ocean Ports, for the Fiscal Year ending March 31, 1909.

	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Totals.
Agriculturists ..	6,613	5,839	3,533	1,792	1,296	953	913	587	478	306	559	2,793	25,644
General labourers	6,528	3,040	1,458	949	696	693	595	663	446	479	605	2,227	18,379
Mechanics	3,888	3,791	2,625	1,711	1,357	1,834	1,172	623	325	334	352	926	18,938
Clerks	1,139	1,576	1,136	842	669	507	469	296	241	167	182	440	7,664
Miners	355	327	250	236	196	259	183	116	96	99	103	124	2,353
Female servants	1,067	1,055	1,000	564	536	575	562	361	190	150	147	408	6,615
Not classed	1,079	1,526	741	757	648	582	610	356	322	266	232	364	7,483
Totals	20,669	17,145	10,752	6,851	5,398	5,403	4,504	3,002	2,098	1,801	2,171	7,282	87,076
Maritime													
Provinces	1,419	836	462	384	438	413	412	395	298	252	170	665	6,144
Quebec	3,566	3,743	1,901	1,268	1,110	1,600	968	672	347	308	500	899	16,882
Ontario	6,452	5,495	3,239	2,244	1,739	1,469	1,449	811	622	489	676	2,335	27,020
Manitoba	4,723	3,011	1,969	997	714	636	475	337	245	238	233	1,332	14,930
Saskatchewan ..	1,545	1,241	1,079	536	387	345	314	180	162	123	107	636	6,655
Alberta	1,311	1,159	831	507	403	304	324	182	116	124	169	679	6,100
British Columbia ..	1,633	1,669	1,271	915	607	634	562	405	308	267	315	735	9,341
Yukon .....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	1	1	4
Totals	20,669	17,145	10,752	6,851	5,398	5,403	4,504	3,002	2,098	1,801	2,171	7,282	87,076

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TABLE

NATIONALITY, Sex, Occupation and Destination of Immigrant arrivals

	SEX.				TRADE OR								
	Males.	Females.	Children.	Totals.	Farmers or Farm Labour- ers Class.			General Labourers.			Mechanics.		
					Males.	Females.	Children.	Males.	Females.	Children.	Males.	Females.	Children.
African, South	21	18	14	53	9	2	4	1		1	5	6	4
Austrian	86	48	57	171	19	5	5	16	1		22	8	7
Austrian, N.E.S.	1,225	316	289	1,830	550	71	88	545	43	79	66	30	23
Bohemian	7	14	7	28							2	1	1
Bukowinian	1,353	101	92	1,546	325	28	53	985	20	24	24	5	4
Croatian	1			1				1					
Dalmatian		1		1		1							
Galician	4,657	992	995	6,644	1,770	391	704	2,681	160	195	144	32	27
Hungarian, N.E.S.	393	107	95	595	294	34	31	67	8	11	20	8	9
Magyar		1	3	4									
Ruthenian	127	9	13	149	122	4	9	1	1	3	4		
Belgian	401	210	217	828	149	58	86	58	15	10	50	30	26
Bulgarian	52	4		56	20	2		26			4		
Brazilian			4	4									
Chinese	1,695	36	156	1,887	24		1	559		8	46		3
Dutch	227	135	133	495	140	60	83	14	5	4	41	21	20
French	1,143	460	227	1,830	572	131	109	128	21	14	196	79	46
German, N.E.S.	588	326	343	1,257	214	91	149	123	40	57	136	48	58
Alsatian	1			1	1								
Prussian	22	15	37	74	14	8	24	3	1	3	2		
Saxon		1	7	8		1	7						
English	16,512	11,336	9,171	37,019	6,604	2,120	1,972	2,190	983	1,304	4,739	3,036	2,962
Welsh	231	132	100	463	77	23	30	18	8	7	75	35	42
Scottish	5,342	3,959	2,509	11,810	1,901	510	562	549	224	262	1,875	1,023	1,011
Irish	1,733	1,278	598	3,609	745	145	115	243	65	95	308	158	141
West Indian	58	48	7	113	10			13	1	1	10	3	
Bernaduan	4	8	2	14				1			1		
Jamaican	20	12		32									
Greek	165	13	14	192	20			122	5	7	12	1	1
Hebrew, N.E.S.	55	46	50	151	6	2	1	9		4	29	28	35
" Russian	460	486	498	1,444	49	29	30	105	33	51	250	258	269
" Polish	2			2	1						1		
" Austrian	9	6	9	24				2			4	3	3
" German	6	5	4	15	1	1	2				5	1	
Italian	3,567	394	257	4,228	1,183	45	38	2,069	62	48	182	19	11
Japanese	312	153	30	495	69	6	1	131	22	6	17	3	1
Newfoundland	1,605	374	129	2,108	32	1	4	1,289	33	24	160	26	16
New Zealand	36	17	12	65	9	1	2	5			11	1	1
Portuguese	1	1		2		1							
Polish, N.E.S.	50	15	11	76	10			23	3	5	4	5	3
" Austrian	40	1	1	42	28	1	1	10			2		
" German	3			3	1								
" Russian	127	62	60	255	47	17	26	47	12	14	12	10	16
Persian	1			1				1					
Romanian	114	82	82	278	27	13	19	55	11	20	24	20	18
Russian, N.E.S.	1,672	815	1,060	3,547	664	279	493	745	108	204	170	117	105
Finnish	428	158	83	669	61	11	10	291	38	39	34	10	15
Spanish	24	3	5	32				4			8	1	
Swiss	87	27	15	129	51	7	10	5			16	3	
Servian	6	5	20	31				1					
Danish	106	44	10	160	58	6	4	23			18	5	2
Icelandic	17	13	5	35	10	5	2	2	1		3	2	1
Swedish	633	291	211	1,135	268	87	116	257	32	30	78	22	26
Norwegian	432	181	139	752	176	45	69	203	24	37	30	17	24
Turkish	202	21	13	236	85	2	2	99	5	2	10		1

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V.

for Canada at Ocean Ports, for the Fiscal Year ending March 31, 1909.

OCCUPATION.										DESTINATION.							
Clerks, Traders, &c.			Miners.			Female Servants.	Not Classified.			Maritime Provinces.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Yukon.
Males.	Females.	Children.	Males.	Females.	Children.		Males.	Females.	Children.								
3	5	1	6	1		2	3	3	4	5	5	20	3		6	14	
16	6	7	26	13	28	89	7	20	18	2	19	22	6	4	13	104	1
24	7	3	5	3	5	10	4	63	68	94	582	321	472	115	162	84	
			19	12	3	41		5	8	140	414	227	540	148	58	14	
												1					
3			54	3	1	348	5	58	68	131	893	921	3,395	696	54	59	
2	1	2	7	4	4	19	3	33	38	50	37	151	70	112	56	119	
								1	3					4			
								2	1		93	19	24	11	1		
16	5	1	116	58	74	21	12	23	20	219	180	29	230	34	82	54	
	1		2			1				22	5	10	13	5	1		
									4					4			
975	7	33	1				90	29	111	11	146	180	9		2	1,539	
17	10	13				19	15	20	13	12	50	70	105	58	131	69	
94	23	8	29	8	18	85	124	113	32	185	859	106	369	160	99	52	
63	21	10	26	9	18	71	26	46	51	72	196	134	327	236	203	89	
													1				
			1			1	2	5	10	3		3	7	39	21	1	
													8				
1,850	1,108	672	372	212	314	2,793	757	1,082	1,947	1,934	6,074	15,204	4,647	2,890	2,614	3,656	
22	10	4	30	12	11	32	9	12	6	27	65	123	81	37	41	89	
642	432	278	228	64	93	1,141	147	262	303	468	2,372	3,820	1,886	761	1,005	1,495	3
319	149	91	27	12	15	692	91	147	111	122	778	1,310	694	154	288	253	
15	2	1				37	10	5	5	41	21	41	1			9	
1						4	1	4	2	7	1	6					
2						4	13	8		3	6	23					
5	2	3				4	6	1	3	1	62	105	3		2	19	
10	2	6				9	1	5	4	2	97	30	19	3			
44	68	102	3	1		64	9	33	46	43	628	427	292	35	4	15	
											1	1					
3	2	5				1			1		16	8					
	1	2				2					7	7	1				
33	7	5	77	2	5	33	23	166	160	161	1,676	1,712	89	8	124	458	
63	12					3	32	107	22	1	5	2	1		13	473	
43	3		70	29	18	226	11	56	67	1,894	66	66	24	3	12	43	
5	2		3			4	3	9	9	2	2	6	5	1	8	41	
							1				1					1	
			12	2	1	4	1	1	2	18	22	16	11	3	1	5	
											17	13	11	1			
	2		21	5	7	11		5	3	31	86	38	54	26	17	3	
4	5	5				16	4	17	20		154	33	30	58	3		
31	22	29	47	3	5	170	15	116	224	201	727	562	970	706	211	170	
2			40	8	6	84		7	22	4	65	483	29	10	33	54	
5	2	5	2							3	21	7	1				
8	3	1	1			8	6	6	4	1	44	14	35	6	8	21	
							5	5	5	20	29						
6	1					28	1	4	4	12	30	25	36	22	24	11	
2						5					3		28	1	3		
7	9	1	20	3	9	130	3	15	29	14	85	338	274	153	133	138	
7	4		11			73	5	18	9	45	59	119	114	148	152	115	
4	1	3				9	1	4	8	6	58	147			1	24	

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TABLE

NATIONALITY, Sex, Occupation and Destination of Immigrant arrivals

	Sex.				TRADE OR								
	Males.	Females.	Children.	Totals.	Farmers or Farm Labour- ers Class.			General Labourers.			Mechanics.		
					Males.	Females.	Children.	Males.	Females.	Children.	Males.	Females.	Children.
Armenian	44	23	12	79	9	4	4	22	4	5	10	4	2
Egyptian	2			2				1					
Syrian	120	41	28	189	41	2	4	37	5	7	13	5	5
Arabian	2	2		4				1	1				
U.S.A. citizens . . .	56	29	9	94	6	2	1	15	1	1	15	5	
Negro	49	22	2	73	7	1	1	13	1		15	1	
Hindoo	5	1		6							1		
Totals	46,337	22,898	17,841	87,076	16,489	4,253	4,902	13,809	1,997	2,573	8,909	5,090	4,939

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V.

for Canada at Ocean Ports, for the Fiscal Year ending March 31, 1909—*Con.*

OCCUPATION.										DESTINATION.							
Clerks, Traders, &c.			Miners.			Female Servants.	Not Classified.			Maritime Provinces.	Que- bec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Yukon.
Males.	Females.	Children.	Males.	Females.	Children.		Males.	Females.	Children.								
2	4	1				7	1			6	18	50			5		
1											1	1					
24	18	7	1			6	4	5	5	62	82	35	4			6	
1								1		1	2	1					
11	10	6	2			5	7	6	1	12	31	12	11	3	2	23	
13						19	1		1	43	10	17	2			1	
4								1			2	3	1				
4,402	1,960	1,302	1,264	454	635	6,615	1,464	2,529	3,490	6,144	16,882	27,026	14,930	6,655	6,100	9,341	4

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PORT OF NORTH SYDNEY.

For the fiscal year 1908-9, there arrived at the port of North Sydney 7,292 passengers, of whom 2,720 travelled saloon and 4,572 steerage. Of the saloon passengers, 1,858 were destined to Canada and 862 to the United States. Of the steerage passengers, 3,352 were for Canada and 1,220 for the United States. Included in the steerage passengers for Canada were 795 returned Canadians and 167 tourists, leaving the immigration proper at 2,390 souls, a decrease as compared with the preceding fiscal year of 1,332 persons.

Table I. deals with the total arrivals of saloon passengers, Table II. with the total arrivals of steerage passengers, Table III. with the monthly arrivals of immigrants for Canada, and Tables IV. and V. give summaries of the information obtained from immigrants for Canada upon arrival.

TABLE I.

NATIONALITY and Sex of Saloon Passengers arriving at the Port of North Sydney, for the Fiscal Year ending March 31, 1909.

	CANADA.				UNITED STATES.				CANADA AND UNITED STATES.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
Australian	1			1					1			1
Austrian	2			2					2			2
French	84	52	18	154	5	8	5	18	89	60	23	172
German	3			3	5			5	8			8
English	116	33	2	151	16	2		18	132	35	2	169
Welsh	5	1		6	3			3	8	1		9
Scotch	37	7		44	8	1		9	45	8		53
Irish	8			8	1	1		2	9	1		10
West Indian	3			3	1			1	4			4
Jamaican	1			1	1			1	2			2
Greek	1			1					1			1
Italian	4			4					4			4
Newfoundland	301	188	20	509	114	115	3	232	415	303	23	741
New Zealand	1			1					1			1
Russian	2			2	1	2		3	3	2		5
Spanish		1		1						1		1
Syrian					1			1	1			1
U.S.A. citizens	39	12		51	421	128	12	561	460	140	12	612
Canadian	652	217	26	895	5			5	657	217	26	900
Tourist	18	3		21	1	2		3	19	5		24
Totals	1,278	514	66	1,858	583	259	20	862	1,861	773	86	2,720

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TABLE II.

NATIONALITY and Sex of Steerage Passengers arriving at the Port of North Sydney,
for the Fiscal Year ending March 31, 1909.

	CANADA.				UNITED STATES.				CANADA AND UNITED STATES.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
Austrian.....	3			3	1			1	4			4
Belgian.....	2	2	1	5					2		1	3
Bulgarian.....	22			22	6			6	28			28
Chinese.....	13			13					13			13
French.....	82	26	26	134	2	4		6	84	30	26	140
German.....	10			10	6			6	16			16
English.....	46	6	2	54	5			5	51	6	2	59
Welsh.....	4			4	5			5	9			9
Scotch.....	8	1	2	11	2			2	10	1	2	13
Irish.....	2			2	1			1	3			3
West Indian.....	1			1					1			1
Italian.....	1			1	1			1	2			2
Japanese.....	2			2	1			1	3			3
Newfoundland.....	1,592	368	126	2,086	519	370	33	922	2,111	738	159	3,008
Portuguese.....					5			5	5			5
Russian.....	5			5	1			1	6			6
Danish.....	2			2					2			2
Swedish.....	7	3	1	11	1			1	8	3	1	12
Norwegian.....	9			9	1			1	10			10
Syrian.....	4	2	1	7	8	3	3	14	12	5	4	21
U.S.A. citizens.....	7	1		8	39	4	13	56	46	5	13	64
Total immigration....	1,822	409	159	2,390	604	381	49	1,034	2,426	790	208	3,424
Returned Canadian....	545	212	38	795					545	212	38	795
Tourist.....	83	77	7	167	13	150	23	186	96	227	30	353
Totals.....	2,450	698	204	3,352	617	531	72	1,220	3,067	1,229	276	4,572

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TABLE III.

MONTHLY arrivals of Immigrants for Canada, by Nationalities, at the Port of North Sydney, for the Fiscal Year ending March 31, 1909.

	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Totals.
Austrian.....					2							1	3
Belgian.....		5											5
Bulgarian.....		11			9	2							22
Chinese.....						10							13
French.....		21	16	6	7	13	35	20	12	1	1	2	134
German.....	1			3		2			3			1	10
English.....	3	9	22	4	2	4	8	1	1				54
Welsh.....								4					4
Scotch.....	2	1	4		2		2						11
Irish.....			1						1				2
West Indian.....									1				1
Italian.....												1	1
Japanese.....						2							2
Newfoundland.....	297	305	181	112	193	220	173	217	83	62	37	206	2,086
Russian.....									2	3			5
Danish.....	1						1						2
Swedish.....			3				1		1			6	11
Norwegian.....	1	2	2				3	1					9
Syrian.....	2		3			1						1	7
U.S.A. citizens.....	1	1		4	1					1			8
Totals.....	308	355	232	129	216	254	223	245	104	67	39	218	2,390

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TABLE IV.

MONTHLY arrivals of Immigrants for Canada, by Occupation and Destination, at the Port of North Sydney, for the Fiscal Year ending March 31, 1900.

	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Totals.
Agriculturists	1	1	3	3	15	8	2	3	3	3	1	1	44
General labourers	242	213	118	60	115	126	157	181	54	42	24	170	1,502
Mechanics.....	31	47	27	9	29	34	17	6	24	4		24	252
Clerks.....	3	7	9	4	7	7	2	4	5	4	1	5	58
Miners.....	9	17	34	19	11	29	3	9	3	5	8	4	151
Female servants	20	45	26	16	20	23	34	27	12	2	2	12	239
Not classed.....	2	25	15	18	19	27	8	15	3	7	3	2	144
Totals.	308	355	232	129	216	254	223	245	104	67	39	218	2,390
Maritime Provinces.....	265	298	213	115	191	214	212	234	95	65	34	189	2,125
Quebec	17	26	4	8	7	23	4	6	4	1		6	106
Ontario.....	8	20	10	5	2	4	3	5		1	1	9	68
Manitoba.....	2	4	4	1	14	1			2			7	35
Saskatchewan												1	1
Alberta.....		2			1	4						5	12
British Columbia.....	16	5	1		1	8	4		3		4	1	43
Totals.	308	355	232	129	216	254	223	245	104	67	39	218	2,390

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TABLE
NATIONALITY, Sex, Occupation and Destination of Immigrant arrivals for

	SEX.				TRADE OR								
	Males.	Females.	Children.	Totals.	Farmers or Farm Labourers Class.			General Labourers.			Mechanics.		
					Males.	Females.	Children.	Males.	Females.	Children.	Males.	Females.	Children.
Austrian.....	3			3				3					
Belgian.....	2	2	1	5				2	2	1			
Bulgarian.....	22			22				20					
Chinese.....	13			13	1			12					
French.....	82	26	26	134	3			62	4	9	12	7	10
German.....	10			10				7					
English.....	46	6	2	54				17	1		7		
Welsh.....	4			4	1								
Scotch.....	8	1	2	11				1			5		
Irish.....	2			2				1			1		
West Indian.....	1			1				1					
Italian.....	1			1				1					
Japanese.....	2			2				2					
Newfoundland.....	1,592	368	126	2,086	32	1	4	1,280	33	24	160	25	16
Russian.....	5			5	1			1					
Danish.....	2			2				2					
Swedish.....	1	3	1	11				3	2		4	1	1
Norwegian.....	9			9	1			6			1		
Syrian.....	4	2	1	7				1			1		
U.S.A. citizens.....	7	1		8				4			1		
Totals.....	1,822	409	159	2,390	39	1	4	1,426	42	34	192	33	27

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V.

Canada at the Port of North Sydney, for the Fiscal Year ending March 31, 1909.

OCCUPATION.										DESTINATION.						
Clerks, Traders, &c.			Miners.			Female Servants.	Not Classified.			Maritime Provinces.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.
Males.	Females.	Children.	Males.	Females.	Children.		Males.	Females.	Children.							
										1	2					
										5						
			2							22						
										1	10	2				
3			1			11	1	4	7	116	18					
2			1							10						
4			17	3	2	2	1			49	5					
			3							4						
			2	1	2					9	1		1			
										2						
										1						
										1						
42	2		70	29	18	225	8	53	64	1,874	2					
2							1			5	66	66	24	1	12	43
										2						
										2						
										2			9			
1										7	1		1			
2							2	1		6	1					
						1	2			8						
56	2		96	33	22	239	13	59	72	2,125	106	68	35	1	12	43

9-10 EDWARD VII., A. 1910

PORT OF HALIFAX.

For the fiscal year 1908-9, there arrived at the port of Halifax 21,528 passengers, of whom 1,829 travelled saloon and 19,699 steerage. Of the saloon passengers, 1,803 were destined to Canada, and 21 to the United States. Of the steerage passengers, 17,096 were for Canada and 2,603 for the United States. Included in the steerage passengers for Canada were 3,419 returned Canadians and 298 tourists, leaving the immigration proper at 13,379 souls, a decrease as compared with the preceding fiscal year of 14,940 persons.

Table I. deals with the total arrivals of saloon passengers, Table II. with the total arrivals of steerage passengers, Table III. with the monthly arrivals of immigrants for Canada, and Tables IV. and V. give summaries of the information obtained from immigrants for Canada upon arrival.

TABLE I.

NATIONALITY and Sex of Saloon Passengers arriving at the Port of Halifax, for the Fiscal Year ending March 31, 1909.

	CANADA.				UNITED STATES.				CANADA AND UNITED STATES.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
Australian...	1			1					1			1
Austrian.....	2			2					2			2
Chinese.....	1			1					1			1
French.....	6	3		9	1			1	7	3		10
German.....	1			1					1			1
English.....	272	108	22	402	4	1	3	8	276	109	25	410
Welsh.....	2	1		3					2	1		3
Scotch.....	56	16	4	76		1		1	56	17	4	77
Irish.....	8	7	2	17	2	2		4	10	9	2	21
West Indian.....	4	3		7	1	1		2	5	4		9
Bermudian.....	1			1					1			1
Italian.....	2			2					2			2
Newfoundland.....	10	19	1	30	1			1	11	19	1	31
Danish.....		1	3	4						1	3	4
Swedish.....	2	1		3					2	1		3
Norwegian.....	1			1					1			1
Syrian.....	3			3					3			3
U.S.A. citizens.....	17	3		20	3	1		4	20	4		24
Canadian.....	277	170	48	495					277	170	48	495
Tourist.....	424	265	41	730					424	265	41	730
Totals.....	1,090	597	121	1,808	12	6	3	21	1,102	603	124	1,829

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TABLE II.

NATIONALITY and Sex of Steerage Passengers arriving at the Port of Halifax, for the Fiscal Year ending March 31, 1909.

	CANADA.				UNITED STATES.				CANADA AND UNITED STATES.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
African, South.....	4	4		8					4	4		8
Australian.....	3	1		4					3	1		4
Austrian, N. E. S.....	24	17	25	66	125	11	3	139	149	28	28	205
Bohemian.....	1			1					1			1
Bukowinian.....	259	25	32	316					259	25	32	316
Galician.....	1,022	264	261	1,547	1			1	1,023	264	261	1,548
Hungarian, N. E. S.....	17	7	7	31	5			5	22	7	7	36
Ruthenian.....	11	5	11	27					11	5	11	27
Belgian.....	95	52	68	215	10	4	7	21	105	56	75	236
Bulgarian.....	3	1		4	1			2	4	1	1	6
Chinese.....				2					2			2
Dutch.....	60	22	15	97	11	5	1	17	71	27	16	114
French.....	279	63	54	396	11	2	4	17	290	65	58	413
German, N. E. S.....	89	47	56	192	14	5		19	103	52	56	211
Alsatian.....	1			1					1			1
Prussian.....	14	10	24	48	1		2	3	15	10	26	51
English.....	3,404	1,425	1,344	6,173	138	55	33	226	3,542	1,480	1,377	6,399
Welsh.....	35	21	9	65	3	2	1	6	38	23	10	71
Scotch.....	1,063	519	365	1,947	28	8	8	44	1,091	527	373	1,991
Irish.....	211	96	49	356	10	4	4	18	221	100	53	374
West Indian.....	13	11		24	12			12	25	11		36
Bermudian.....		1		1						1		1
Jamaican.....	5	3		8					5	3		8
Creek.....	27	1	1	29	67		6	73	94	1	7	102
Hebrew, N. E. S.....	4	8	8	20	7	2	4	13	11	10	12	33
" Russian.....	117	78	76	271	16	15	11	42	133	93	87	313
" Polish.....	1			1					1			1
" Austrian.....	2	1	1	4					2	1	1	4
" German.....	2			2					2			2
Italian.....	133	7	4	144	12	3	4	19	145	10	8	163
Japanese.....	1			1					1			1
Newfoundland.....	7	6	2	15	18	2		20	25	8	2	35
New Zealand.....	3			3					3			3
Portuguese.....		1		1						1		1
Polish, N. E. S.....	16	1		17	11	1		12	27	2		29
" Austrian.....				2	2			2	2			2
" German.....	2			2					2			2
" Russian.....	21	3	4	28	2			2	23	3	4	30
Roumanian.....	20	9	8	37	5	1		6	25	10	8	43
Russian, N. E. S.....	367	84	120	571	219	93	89	401	586	177	209	972
Finnish.....	119	19	2	140	637	112	60	809	756	131	62	949
Spanish.....	3	1		4	1			1	4	1		5
Swiss.....	22	4	4	30	3			6	25	7	4	36
Servian.....	5	5	20	30	6	5	5	16	11	10	25	46
Danish.....	18	5		23	26	4	1	31	44	9	1	54
Icelandic.....	2	1	1	4					2	1	1	4
Swedish.....	121	24	20	165	107	39	25	172	228	63	46	337
Norwegian.....	68	18	8	94	140	30	19	189	208	48	27	283
Turkish.....	3	1		4	21	1		22	24	2		26
Armenian.....	33	18	8	59	78	31	23	132	111	49	31	191
Syrian.....	59	16	15	90	12	7	3	22	71	23	18	112
Arabian.....		1		1						1		1
U. S. A. citizens.....	7	3	1	11	51	18	11	80	58	21	12	91
Negro.....	41	7	1	49					41	7	1	49
Hindoo.....					1			1	1			1
Total immigration....	7,839	2,916	2,624	13,379	1,812	463	326	2,601	9,651	3,379	2,950	15,980
Returned Canadians....	2,694	493	232	3,419					2,694	493	232	3,419
Tourist.....	206	77	15	298	2			2	208	77	15	300
Totals.....	10,739	3,486	2,871	17,096	1,814	463	326	2,603	12,553	3,949	3,197	19,699

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TABLE III.

MONTHLY arrivals of Immigrants for Canada, by Nationalities, at the Port of Halifax,
for the Fiscal Year ending March 31, 1909.

	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Totals.
African, South	2							1	4	1			8
Australian	3								1				4
Austrian, N.E.S.	5	34	11	3		1		1		2	4	4	66
Bohemian	1												1
Bukowinian	28	250	37								1		316
Galician	462	801	280	1				1			2		1,547
Hungarian, N.E.S.	10		11	5					4			1	31
Ruthenian		27											27
Belgian	61	16	7	18	1	8	5	3	7	14	14	61	215
Bulgarian	1		3										4
Chinese				2									2
Dutch	44		1		1								47
French	199		2	1		8		2	33	16	32	103	396
German, N.E.S.	84	11	30	1	2	3	7	5	8	11	13	17	192
Alsatian	1												1
Prussian						1			47				48
English	3,700	189	45	44	69	40	63	134	255	133	301	1,200	6,173
Welsh	38	3			1		1	6	1	1	1		13
Scotch	1,070	9	14	40	15	13	8	26	136	90	104	422	1,947
Irish	208	3	14	1	4	1	8	3	21	19	12	62	356
West Indian		6	13	3							1	1	24
Bermudian							1						1
Jamaican				4			2	2					8
Greek	9							1	1	2	7	9	29
Hebrew, N.E.S.	9	1							6	2	2		20
" Russian	76	4	2	6	8		8	22	41	27	30	47	271
" Polish	1												1
" Austrian	4												4
" German	2												2
Italian	31	18			4		3	1	1	14	32	40	144
Japanese	1												1
Newfoundland	2	1	2	1			4	1		1		3	15
New Zealand												2	3
Portuguese	1												1
Polish, N.E.S.			2			10			1			4	17
" German				2									2
" Russian		6		5	8		1			7		1	28
Romanian	15	9	4	1					2			6	37
Russian, N.E.S.	237	44	49	56	1			3	31	40	28	82	571
Finnish	13						1	5	24	11	34	52	140
Spanish					1			1					4
Swiss	2				1				1	2		24	30
Servian									1			29	30
Danish	11										7	5	23
Icelandic									3			1	4
Swedish	43							4		8	32	56	165
Norwegian	21		1			3			11	1	21	36	94
Turkish	1	2		1									4
Armenian	21	2	5	10					13			8	59
Syrian	8	3	1	6	33			1	12	13	10	3	90
Arabian									1				1
U. S. A. citizens	1				2				2	1	2	3	11
Negro	34		11			3			1				49
Totals	6,461	1,439	545	211	154	88	112	224	700	419	694	2,332	13,379

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TABLE IV.

MONTHLY arrivals of Immigrants for Canada, by Occupation and Designation, at the Port of Halifax, for the Fiscal Year ending March 31, 1909.

	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Totals.
Agriculturists.....	3,215	874	316	58	29	11	13	52	228	113	235	1,288	6,432
General labourers.....	708	180	75	40	39	9	13	29	106	67	103	292	1,661
Mechanics.....	1,461	83	88	27	31	8	27	76	117	109	127	325	2,479
Clerks.....	329	10	7	5	9	6	6	15	76	29	48	125	665
Miners.....	191	50	28	52	31	42	23	19	56	33	28	29	582
Female servants.....	333	70	23	15	9	...	9	19	61	39	54	167	799
Not classed.....	224	172	8	14	6	12	21	14	56	29	99	106	761
Totals.....	6,461	1,439	545	211	154	88	112	224	700	419	694	2,332	13,379
Maritime Provinces.....	636	302	137	132	137	86	94	86	126	83	75	249	2,133
Quebec.....	667	182	12	17	6	...	7	32	94	83	200	245	1,545
Ontario.....	2,369	205	56	25	7	...	3	65	223	105	213	700	3,971
Manitoba.....	1,279	523	170	46	3	2	4	5	105	56	68	527	2,788
Saskatchewan.....	555	133	83	1	...	...	1	18	70	43	37	258	1,199
Alberta.....	376	85	69	...	1	...	1	10	38	20	44	201	845
British Columbia.....	579	9	18	2	8	44	29	57	152	898
Totals.....	6,461	1,439	545	211	154	88	112	224	700	419	694	2,332	13,379

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TABLE

NATIONALITY, Sex, Occupation and Destination of Immigrant arrivals for

	SEX.				TRADE OR								
					Farmers or Farm Labourers Class.			General Labourers.			Mechanics.		
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Males.	Females.	Children.	Males.	Females.	Children.
African, South....	4	4		8	2							1	
Australian.....	3	1		4	1						2		
Austrian, N.E.S.	24	17	25	66	10	4	6	2			6	2	
Bohemian.....	1			1							1		
Bukowinian.....	259	25	32	316	164	11	25	87	3	1	7	1	1
Galician.....	1,022	264	261	1,547	822	162	238	136	12	6	60	9	9
Hungarian, N.E.S.	17	7		31	5	1	2	4	1	1	4	2	
Ruthenian.....	11	5	11	27	10	2	7	1	1	3			
Belgian.....	95	52	68	215	46	17	22				6	4	7
Bulgarian.....	3	1		4	2	1		1					
Chinese.....	2			2									
Dutch.....	60	22	15	97	45	16	14	3		1	11	4	
French.....	279	63	54	396	188	38	36	20	4	1	38	9	6
German, N.E.S.	89	47	56	192	48	22	31	8	5	5	21	9	9
Alsatian.....	1			1	1								
Prussian.....	14	10	24	48	12	8	24	1			1		
English.....	3,404	1,425	1,344	6,173	1,975	435	492	345	95	114	712	313	331
Welsh.....	35	21	9	65	15	6	5	2			9	3	2
Scotch.....	1,063	519	365	1,947	516	83	106	89	27	36	262	103	87
Irish.....	211	96	49	356	127	18	10	23	7	12	30	17	14
West Indian.....	13	11		24	6			3			1	2	
Bermudian.....		1		1									
Jamaican.....	5	3		8							3		
Greek.....	27	1	1	29				25		1	1		
Hebrew, N.E.S.	4	8		20		1	1				4	5	6
" Russian.....	117	78	76	271	5	4	4	19	3	3	68	46	51
" Polish.....	1			1							1		
" Austrian.....	2	1	1	4							1		
" German.....	2			2							2		
Italian.....	153	7	4	144	7			114	4	3	7	1	
Japanese.....	1			1									
Newfoundland.....	7	6	2	15				5				1	
New Zealand.....	3			3	2								
Portuguese.....		1		1		1							
Polish, N.E.S.	16	1		17				5			1		
" German.....	2			2									
" Russian.....	21	3	4	28	1			6					
Roumanian.....	20	9	8	37	10	3	5	5			5	2	1
Russian, N.E.S.	367	84	120	571	170	51	81	158	9	19	33	10	17
Finnish.....	119	19	2	140	29	3		70	5	2	15	1	
Spanish.....	3	1		4							3		
Swiss.....	22	4	4	30	18	4	4				1		
Servian.....	5	5	20	30									
Danish.....	18	5		23	10						6	1	
Icelandic.....	2	1	1	4	2							1	1
Swedish.....	121	24	20	165	74	11	16	33	1	4	9		
Norwegian.....	68	18	8	94	32	5	1	29	2	3	5	2	3
Turkish.....	3	1		4	1			2	1				
Armenian.....	33	18	8	59	6			15	4	5	9	3	2
Syrian.....	59	16	15	90	18	2	2	27	3	4	5	3	4
Arabian.....		1		1					1				
U.S.A. citizens.....	7	3	1	11							5	1	
Negro.....	41	7	1	49	6	1	1	10	1		15		
Totals.....	7,839	2,916	2,624	13,379	4,386	910	1,136	1,248	189	224	1,372	556	551

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V.

Canada, at the Port of Halifax, for the Fiscal Year ending March 31, 1909.

OCCUPATION.

DESTINATION.

Clerks, Traders, &c.			Miners.			Female Servants.	Not Classified.			Maritime Provinces.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.
Males.	Females.	Children.	Males.	Females.	Children.		Males.	Females.	Children.							
2	3					1				4		2				2
3	1		3	6	18	3		1	1	37	10	4	3	10		2
						7				1						
			1	1	2	7		2	3	29	86	73	70	42	16	
1			2	1		72	1	2	8	21	178	207	868	146	122	5
1			2	2	4	1	1			9	2	2	5	6	1	6
						1		1	1	1	6	1	8	11		
1			40	25	39	4	2	2		100	28	1	65	8	10	3
													1	3		
2						1				10		2				
1								1			5	16	22	7	34	3
11			8	1	5	9	14	2	6	45	133	21	111	46	24	16
2			8	3	7	7	2	1	1	36	16	17	81	20	20	2
						1							1			
								1		2		1	6	39		
202	83	59	78	40	79	344	92	115	269	1,129	478	2,330	813	548	363	512
1	1		6	2	1	8	2	1	1	17	2	16	8	11	1	10
92	39	32	74	23	34	215	30	29	70	268	148	692	309	121	171	238
18	3	2	9	1	5	39	4	11	6	67	24	158	59	13	16	19
						9	3			13	6	4				1
						1				1						
1						3	1			3	1	4				
						1	1			1	2	24	1		1	
						1		1	1	1	12	5	2			
22	16	15	1			6	2	3	3	26	129	78	38			
											1					
1	1	1									4					
													1			
1	2		3		1		1			45	73	15	7		1	3
							1			1						
1	1					1	1	3	2	15						
1																
												1	2			
																1
			10			1				14		3				
			2							2						
			14	3	4					20	4	4				
1	1	1				2		2	2	13	2		1	21		
1			3			11		2	2	67	97	54	210	95	19	29
1			4			10				10	117				4	9
	1									3	1					
3											5					
							5	5	20	29						7
2						4				2	3					
1			4			12				3	5	38	45	29	24	21
			1			7	1	2	1	21	2	20	19	16	11	5
										3		1				
2	4	1				7	1			5	17					
5	5	4	1			3	3		1	47	30	9	4			
												1				
1			1			2			1	1	5				2	3
9						5	1			33	7					
389	161	115	275	108	199	799	169	193	399	2,133	1,545	3,971	2,788	1,199	845	898

9-10' EDWARD VII., A. 1910

PORT OF ST. JOHN.

For the fiscal year 1908-9, there arrived at the port of St. John 21,213 passengers, of whom 1,024 travelled saloon and 20,189 steerage. Of the saloon passengers, 999 were destined to Canada and 25 to the United States. Of the steerage passengers 17,300 were for Canada and 2,889 for the United States. Included in the steerage passengers for Canada were 3,505 returned Canadians and 194 tourists, leaving the immigration proper at 13,601 souls, a decrease as compared with the preceding fiscal year of 4,293 persons.

Table I. deals with the total arrivals of saloon passengers, Table II. with the total arrivals of steerage passengers, Table III. with the monthly arrivals of immigrants for Canada, and Tables IV. and V. give summaries of the information obtained from immigrants for Canada upon arrival.

TABLE I.

NATIONALITY and Sex of Saloon Passengers arriving at the Port of St. John, for the Fiscal Year ending March 31, 1909.

	CANADA.				UNITED STATES.				CANADA AND UNITED STATES.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
Australian.....	1	2		3					1	2		3
Austrian.....	1			1					1			1
Belgian.....	1			1					1			1
Dutch.....	3	2		5					3	2		5
French.....	4	4		8					4	4		8
English.....	223	101	18	342	5	2		7	228	103	18	349
Welsh.....	5	3		8					5	3		8
Scotch.....	37	15	2	54	2			2	39	15	2	56
Irish.....	13	5	2	20					13	5	2	20
West Indian.....	31	46	19	96	3			3	34	46	19	99
Bermudian.....	1	5	1	7					1	5	1	7
Italian.....	1	1		2	1	1		2	2	2		4
New Zealand.....	1	1		2					1	1		2
Portuguese.....		1		1						1		1
Spanish.....					1			1	1			1
Swiss.....	1	1	1	3					1	1	1	3
Egyptian.....	1			1					1			1
U. S. A. citizens.....	8	5		13	5	5		10	13	10		23
Negro.....	1	1		2					1	1		2
Canadian.....	192	131	17	340					192	131	17	340
Tourist.....	32	36	22	90					32	36	22	90
Totals.....	557	360	82	999	17	8		25	574	368	82	1,024

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TABLE II.

NATIONALITY and Sex of Steerage Passengers arriving at the Port of St. John, for the Fiscal Year ending March 31, 1909.

	CANADA.				UNITED STATES.				CANADA AND UNITED STATES.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
African, South.	1	2	2	5					1	2	2	5
Australian.	3	4		7					3	4		7
Austrian, N.E.S.	148	37	41	226	18	22	6	46	166	59	47	272
Bohemian.		8		8	3			3	3	8		11
Bukowinian.	903	40	26	969	1	1		2	904	41	26	971
Galician.	2,415	353	256	3,024	13	14	5	32	2,428	367	261	3,056
Hungarian.	35	16	23	74	21	21	13	55	56	37	36	129
Belgian.	91	33	42	166	9	6	8	23	100	39	50	189
Bulgarian.					1			1	1			1
Chinese.	1			1					1			1
Dutch.	26	13	28	67	2	1	1	4	28	14	29	71
French.	19	11	8	38					19	11	8	38
German, N.E.S.	81	47	60	188	44	22	24	90	125	69	84	278
Prussian.	5	4	13	22		1	1	2	5	5	14	24
English.	2,906	1,405	981	5,292	131	82	68	281	3,037	1,487	1,049	5,573
Welsh.	57	17	16	90	3	1		4	60	18	16	94
Scotch.	638	268	180	1,086	53	16	10	79	691	284	190	1,165
Irish.	343	132	83	558	36	8	1	45	379	140	84	603
West Indian.	28	27	4	59	3	4		7	31	31	4	66
Bermudian.	3	3	1	7					3	3	1	7
Jamaican.		1		1						1		1
Greek.	15		2	17					15		2	17
Hebrew, N.E.S.	9	3	2	15	4	1	2	7	13	4	5	22
" Russian.	63	57	57	177	2	2	1	5	65	59	58	182
" Austrian.	1	1		2					1	1		2
" German.	1	1		2					1	1		2
Italian.	185	4	2	191	3	1	1	5	188	5	3	196
Japanese.					5	1		6	5	1		6
Newfoundland.	4			4					4			4
Polish, N.E.S.	10	3		13	5	6		11	15	9		24
" Russian.	23	13	14	50		6	6	12	23	19	20	62
Roumanian.	26	18	27	71	1	1		2	27	19	27	73
Russian, N.E.S.	361	110	88	559	127	100	104	331	488	210	192	890
Finnish.	178	41	21	240	730	114	53	897	908	155	74	1,137
Swiss.	4			4	2	2	4	8	6	2	4	12
Servian.				1				1	1			1
Danish.	27	7	2	36	60	15	13	88	87	22	15	124
Icelandic.	1			1					1			1
Swedish.	123	29	11	163	148	27	8	183	271	56	19	346
Norwegian.	107	18	11	136	317	105	60	482	424	123	71	618
Turkish.					1	1		2	1	1		2
Egyptian.	1			1					1			1
Syrian.	2	1		3					2	1		3
U. S. A. citizens.	3	1		4	100	38	21	159	103	39	21	163
Negro.	8	15	1	24					8	15	1	24
Total immigration.	8,855	2,743	2,003	13,601	1,844	619	410	2,873	10,699	3,362	2,413	16,474
Returned Canadians.	2,665	535	306	3,505					2,665	535	306	3,505
Tourists.	123	48	23	194	13	3		16	136	51	23	210
Totals.	11,643	3,326	2,331	17,300	1,857	622	410	2,889	13,500	3,948	2,741	20,189

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TABLE III.

MONTHLY arrivals of Immigrants for Canada, by Nationalities, at the Port of St. John, for the fiscal Year ending March 31, 1909.

—	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Totals
African, South...	1									4			5
Australian...	2								1	2		2	7
Austrian, N. E. S.	133							20	2	14	28	29	226
Bohemian...	6											2	8
Bukowinian...	941							3		1		24	969
Galician...	2,793							21	15	61	18	116	3,024
Hungarian...	28								13	18		15	74
Belgian...	67							3	9	34	10	43	166
Chinese...	1												1
Dutch...	13							2	2		1	49	67
French...	19							4	1	3		11	38
German, N. E. S.	99							5	7	20	25	32	188
Prussian...	22												22
English...	2,708			1		1		121	343	309	364	1,445	5,292
Welsh...	45							7	8	2	3	25	90
Scotch...	461				1			18	81	61	78	386	1,086
Irish...	293							7	43	12	28	175	558
West Indian...	6	11		6	8	17	3	1	2	2		3	59
Bermudian...	3				1		2	1					7
Jamaican...							1						1
Greek...	4											13	17
Hebrew, N. E. S.	5									6	4		15
" Russian...	63							24	21	40	17	12	177
" Austrian...	2												2
" German...										2			2
Italian...	169								1	3	2	16	191
Newfoundland...	4												4
Polish, N. E. S.	2										11		13
" Russian...	25							5		16		4	50
Roumanian...	32							8	4	3	5	19	71
Russian, N. E. S.	218							17	39	104	97	84	559
Finnish...	14							19	64	75	36	32	240
Swiss...	2							1		1			4
Danish...	18							1	4	2		11	36
Icelandic...											1		1
Swedish...	43							5	22	13	25	55	163
Norwegian...	37							2	9	5	8	75	136
Egyptian...									1				1
Syrian...						2			1				3
U. S. A. citizens...	2								1	1			4
Negro...		2	9		2	1	10						24
Totals...	8,281	13	9	7	12	21	16	295	694	814	761	2,678	13,601

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TABLE IV.

MONTHLY arrivals of Immigrants for Canada by Occupation and Destination, at the Port of St. John, for the fiscal Year ending March 31, 1909.

—	April.	May.	June.	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Totals
Agriculturists. . .	1,671	1	...	...	...	1	...	24	111	67	111	850	2,836
General labourers .	3,983	3	1	...	3	2	...	70	169	282	249	777	5,539
Mechanics	1,249	2	...	3	...	1	...	53	121	171	156	455	2,211
Clerks	367	4	4	1	2	8	1	20	80	51	73	224	835
Miners	93	...	...	...	...	...	...	26	30	45	41	61	296
Female servants ..	421	3	4	1	6	9	11	34	58	58	53	158	816
Not classed.....	497	...	...	2	1	...	4	68	125	140	78	153	1,068
Totals . . .	8,281	13	9	7	12	21	16	295	694	814	761	2,678	13,601
Maritime Provinces	469	4	2	6	6	11	8	30	59	93	37	217	942
Quebec	1,328	6	2	...	2	2	...	64	98	131	111	179	1,923
Ontario.	1,935	1	5	1	3	8	8	74	237	237	229	705	3,443
Manitoba	2,751	...	...	...	1	...	...	34	80	127	124	659	3,776
Saskatchewan.....	732	...	...	...	...	...	...	19	48	54	54	298	1,205
Alberta	690	...	...	...	...	...	...	32	56	74	84	350	1,286
British Columbia..	376	2	42	116	98	121	270	1,025
Yukon..	1	...	1
Totals . . .	8,281	13	9	7	12	21	16	295	694	814	761	2,678	13,601

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TABLE
NATIONALITY, Sex, Occupation and Destination of Immigrant Arrivals for

	SEX.				TRADE OR								
					Farmers or Farm Labourers Class.			General Labourers.			Mechanics.		
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Males.	Females.	Children.	Males.	Females.	Children.
African, South.	1	2	2	5	1	1	2				1		
Australian.	3	4		7	2								
Austrian, N.E.S.	148	37	41	226	6	3	5	131	17	31	8	5	5
Bohemian.		8		8									
Bukowinian.	903	40	26	969	73	2		822	15	21	5		
Galician.	2,415	353	256	3,024	247	28	48	2,098	115	153	18	5	3
Hungarian.	35	16	23	74	6	2	5	25	4	6	1	3	4
Belgian.	91	33	42	166	23	13	20	33	5	7	9	3	
Chinese.	1			1				1					
Dutch.	26	13	28	67	20	4	18	2					
French.	19	11	8	38	4	1		2			3		
German, N.E.S.	81	47	60	188	15	9	14	46	14	31	8	5	7
Prussian.	5	4	13	22				2	1	3	1		
English.	2,906	1,405	981	5,292	1,094	275	190	442	134	110	834	324	326
Welsh.	57	17	16	90	19	2	1	5			21	2	7
Scotch.	638	268	180	1,086	234	47	68	75	9	2	269	64	57
Irish.	343	132	83	558	138	15	27	56	8	10	67	12	17
West Indian.	28	27	4	59	2			8			5	1	
Bermudian.	3	3	1	7				1			1		
Jamaican.		1		1									
Greek.	15		2	17				14		2	1		
Hebrew, N.E.S.	9	3	3	15	1			5		1	2	1	
" Russian.	63	57	57	177	2			30	9	13	30	28	20
" Austrian.	1	1		2							1	1	
" German.	1	1		2							1	1	
Italian.	185	4	2	191				180	3	1	1		
Newfoundland.	4			4				4					
Polish, N.E.S.	10	3		13				10					
" Russian.	23	13	14	50	3			17	5	8	3	1	3
Roumanian.	26	18	27	71	1			20	8	17	4	3	5
Russian, N.E.S.	361	110	88	559	22	4	3	297	23	40	19	12	3
Finnish.	178	41	21	240	17	2		154	9	3	3		
Swiss.	4			4	2						2		
Danish.	27	7	2	36	12	1		10			4	2	2
Icelandic.	1			1	1								
Swedish.	123	29	11	163	12	2	2	100	7	3	9		
Norwegian.	107	18	11	136	20	1	3	82	4	4	3	1	1
Egyptian.	1			1									
Syrian.	2	1		3									
U. S. A. citizen.	3	1		4				2	1		1		
Negro.	8	13	1	24	1			3				1	
Totals.	8,855	2,743	2,003	13,601	2,018	412	406	4,677	396	466	1,275	476	460

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V.

Canada at the Port of St. John, for the Fiscal Year ending March 31, 1909.

OCCUPATION.									DESTINATION.								
Clerks, Traders, &c.			Miners.			Female Servants.	Not Classified.			Maritime Provinces.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Yukon.
Males.	Females.	Children.	Males.	Females.	Children.		Males.	Females.	Children.								
										1		1				3	
	1					1		2		1		3				3	
						10	1	2		23	57	17	54	22	33	20	
						8					6					2	
						20		3	5	106	279	112	376	56	32	8	
1						162	1	43	52	91	457	428	1,673	169	182	24	
						3	1	4	8	11	7	8	11	29		8	
3	1			6	7	2		3	8	34	23	2	43	4	50	10	
																1	
3	5	9				2	1	2	1	1	1	3	1	7	37	17	
4	2			5	4	8		1	4	3	3	1	12	1	12	6	
8	3	1	3	1	3	10		1	5	19	21	10	28	56	41	13	
						1	1	3	10	1					21		
388	101	62	59	25	36	302	89	244	257	365	420	1,874	885	597	535	616	
6	1	1	5	3	4	4	1	5	3	5	10	21	24	8	9	13	
64	17	7	39	3	4	81	17	47	42	69	74	292	241	114	153	142	1
68	24	12	4	3	3	55	10	15	14	9	53	184	153	30	86	43	
13	1	1				24		1	3	27	9	21	1			1	
1						2		1	1	6		1					
						1						1					
												17					
1								2	2		13	2					
	3	4				6	1	11	20	8	97	37	29	6			
											2						
											1	1					
			4					1	1	24	129	37			1		
										4							
				1		2					2	9	2				
						3		4	3	2	23	4	17		4		
						3	1	4	5		28	5	18	17	3		
1	1	5	20			47	2	18	37	90	146	101	120	46	20	36	
			4			27		3	18	4	29	166	6	5	10	20	
											2	2					
1						4				7	5	2	13	1	6	2	
											1						
			1			17	1	3	6	6	15	55	42	3	22	20	
2	1					6		5	3	10	6	14	27	34	26	19	
1												1					
2	1									2		1					
										3	1						
4						14			1	10	3	10				1	
571	162	102	185	46	65	816	129	435	504	942	1,923	3,443	3,776	1,205	1,286	1,025	1

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PORT OF QUEBEC.

For the fiscal year 1908-9, there arrived at the port of Quebec 71,218 passengers, of whom 6,698 travelled saloon and 64,520 steerage. Of the saloon passengers, 5,539 were destined to Canada and 1,159 to the United States. Of the steerage passengers, 56,198 were for Canada and 8,322 for the United States. Included in the steerage passengers for Canada were 10,113 returned Canadians and 2,015 tourists, leaving the immigration proper at 44,070 souls, a decrease as compared with the preceding fiscal year of 68,254 persons.

Table I. deals with the total arrivals of saloon passengers, Table II. with the total arrivals of steerage passengers, Table III. with the monthly arrivals of immigrants for Canada, and Tables IV. and V. give summaries of the information obtained from immigrants for Canada upon arrival.

TABLE I.

NATIONALITY and Sex of Saloon Passengers arriving at the Port of Quebec, for the Fiscal Year ending March 31, 1909.

	CANADA.				UNITED STATES.				CANADA AND UNITED STATES.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
African, South.....	1			1	2			2	3			3
Australian.....	9	6		15	1			1	10	6		16
Austrian.....	6			6		1		1	6	1		7
Belgian.....	4	3		7	1			1	5	2		8
Chinese.....	2			2	1			1	3			3
Dutch.....	2	1		3	1			1	3	1		4
French.....	30	22	2	54	2	2		4	32	24	2	58
German.....	9	7		16	3	3		6	12	10		22
English.....	1,196	765	101	2,062	66	35	5	106	1,262	800	106	2,168
Welsh.....	24	8		32					24	8		32
Scotch.....	325	229	31	585	42	30		72	367	259	31	657
Irish.....	67	45	4	116	3	5		8	70	50	4	124
Jamaican.....	1			1				1	1			1
Italian.....	6			6					6			6
Newfoundland.....						1		1		1		1
New Zealand.....	1			1					1			1
Spanish.....	2			2					2			2
Swiss.....	4			4					4			4
Danish.....	2			2					2			2
Swedish.....	4	3		7	1			1	5	3		8
Norwegian.....		3		3						3		3
Armenian.....					1	1		2	1	1		2
Syrian.....					1			1	1			1
U. S. A. citizens.....	25	30	7	66	354	544	40	938	383	574	47	1,004
Canadian.....	1,033	1,009	192	2,234	6	2		8	1,039	1,011	192	2,242
Tourist.....	161	135	18	314	1	4		5	162	139	18	319
Totals.....	2,918	2,266	355	5,539	486	628	45	1,159	3,404	2,894	400	6,698

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TABLE II.

NATIONALITY and Sex of Steerage Passengers arriving at the Port of Quebec, for the Fiscal Year ending March 31, 1909.

	CANADA.				UNITED STATES.				CANADA AND UNITED STATES.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
African, South.....	12	9	9	30	1	.....	.....	1	13	9	9	31
Austrian.....	25	11	8	44	1	1	4	6	26	12	12	50
Austrian, N.E.S.....	143	57	58	258	31	42	24	97	174	99	82	355
Bohemian.....	3	5	7	15	4	1	.....	5	7	6	7	20
Bukowinian.....	191	36	34	261	2	.....	.....	2	193	36	34	263
Croatian.....	1	.....	.....	1	5	.....	.....	5	6	.....	.....	6
Galician.....	1,220	375	478	2,073	7	14	12	33	1,227	389	490	2,106
Hungarian, N.E.S.....	27	15	18	60	16	23	21	60	43	38	39	120
Belgian.....	164	93	86	343	19	9	11	39	183	102	97	382
Bulgarian.....	20	2	.....	22	2	5	2	9	22	7	2	31
Chinese.....	20	.....	.....	20	.....	.....	.....	.....	20	.....	.....	20
Dutch.....	97	69	63	229	21	13	17	51	118	82	80	280
French.....	617	296	131	1,044	29	27	14	70	646	323	145	1,114
German, N.E.S.....	246	128	121	495	100	100	82	282	346	228	203	777
Prussian.....	2	1	.....	3	.....	.....	.....	.....	2	1	.....	3
Saxon.....	.....	1	7	8	.....	.....	.....	.....	.....	1	7	8
English.....	9,163	7,969	6,329	23,461	546	495	279	1,370	9,759	8,464	6,608	24,831
Welsh.....	116	89	72	277	25	19	11	55	141	108	83	332
Scottish.....	3,412	3,024	1,928	8,364	205	175	94	474	3,617	3,199	2,022	8,838
Irish.....	1,037	928	443	2,408	99	79	25	203	1,136	1,007	468	2,611
West Indian.....	2	.....	.....	2	.....	.....	.....	.....	2	.....	.....	2
Bermudian.....	.....	1	1	2	.....	.....	.....	.....	.....	1	1	2
Greek.....	29	4	5	38	9	.....	.....	9	38	4	5	47
Hebrew, N.E.S.....	37	26	27	90	13	10	17	40	50	36	44	130
" Russian.....	248	318	329	895	10	14	27	51	258	332	356	946
" Polish.....	1	.....	.....	1	.....	.....	.....	.....	1	.....	.....	1
" Austrian.....	4	3	6	13	.....	.....	.....	.....	4	3	6	13
" German.....	3	4	4	11	.....	.....	.....	.....	3	4	4	11
Italian.....	201	24	10	235	9	1	.....	10	210	25	10	245
Japanese.....	2	.....	.....	2	.....	.....	.....	.....	2	.....	.....	2
Newfoundland.....	2	.....	.....	2	.....	.....	.....	.....	2	.....	.....	2
New Zealand.....	7	4	1	12	.....	1	.....	1	7	5	1	13
Portuguese.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	1
Polish, N.E.S.....	22	10	9	41	5	7	7	19	27	17	16	60
" Austrian.....	8	1	1	10	.....	.....	.....	.....	8	1	1	10
" German.....	1	.....	.....	1	.....	.....	.....	.....	1	.....	.....	1
" Russian.....	81	42	40	163	2	4	3	9	83	46	43	172
Persian.....	1	.....	.....	1	.....	.....	.....	.....	1	.....	.....	1
Roumanian.....	25	36	33	94	7	10	9	26	32	46	42	120
Russian, N.E.S.....	503	371	561	1,435	228	265	314	807	731	636	875	2,242
Finnish.....	102	93	56	251	212	176	129	517	314	269	185	768
Spanish.....	12	1	.....	13	.....	.....	.....	.....	12	1	.....	13
Swiss.....	45	15	10	70	10	13	6	29	55	28	16	99
Servian.....	1	.....	.....	1	2	.....	.....	2	3	.....	.....	3
Danish.....	34	18	4	56	56	48	36	150	100	66	40	206
Icelandic.....	14	12	4	30	.....	1	.....	1	14	13	4	31
Swedish.....	303	198	162	663	292	219	113	624	595	417	275	1,287
Norwegian.....	176	121	99	396	516	413	185	1,114	692	534	284	1,510
Turkish.....	2	.....	.....	2	10	3	5	18	12	3	5	20
Armenian.....	4	5	4	13	.....	.....	.....	.....	4	5	4	13
Egyptian.....	.....	.....	.....	.....	2	.....	.....	2	2	.....	.....	2
Syrian.....	33	12	6	51	.....	.....	.....	.....	33	12	6	51
Arabian.....	2	.....	.....	2	.....	.....	.....	.....	2	.....	.....	2
U.S.A. citizens.....	26	18	8	52	915	959	201	2,075	941	977	209	2,127
Hindoo.....	5	1	.....	6	1	.....	.....	1	6	1	.....	7
Total immigration.....	18,452	14,446	11,172	44,070	3,473	3,147	1,648	8,268	21,925	17,593	12,820	52,338
Returned Canadian.....	5,910	3,095	1,108	10,113	.....	.....	.....	.....	5,910	3,095	1,108	10,113
Tourist.....	1,005	944	66	2,015	26	27	1	54	1,031	971	67	2,069
Totals.....	25,367	18,485	12,346	56,198	3,499	3,174	1,649	8,322	28,866	21,659	13,995	64,520

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TABLE III.

MONTHLY arrivals of Immigrants for Canada, by Nationalities, at the Port of Quebec, for the Fiscal Year ending March 31, 1909.

	April.	May.	June.	July.	August.	September.	October.	November.	Totals.
African, South		3	2	4		11	8	1	30
Austrian		10	12	7	8	3	3	1	44
Austrian, N.E.S.	1	17	105	26	19	56	22	12	258
Bohemian			5	2			1		15
Bukowinian		165	66	11	3	13		3	261
Croatian		1							1
Galician	22	1,279	494	57	106	51	31	33	2,073
Hungarian, N.E.S.		13	9	16	8	1	6	7	60
Belgian	22	135	50	24	29	37	37	9	343
Bulgarian	1	19	1		1				22
Chinese		1	2	1	16				20
Dutch	15	75	31	35	16	36	18	3	229
French	7	361	159	146	118	120	97	36	1,044
German, N.E.S.	7	120	86	58	54	57	72	41	495
Prussian					3				3
Saxon						8			8
English	1,149	7,285	4,331	3,265	2,474	2,123	2,014	820	23,461
Welsh	3	60	48	38	37	46	31	14	277
Scotch	646	2,006	2,295	840	715	1,035	588	241	8,364
Irish	85	597	476	344	305	308	177	116	2,408
West Indian		599	1			1			2
Bermudian				2					2
Greek	7		5	9	14	3			38
Hebrew, N.E.S.		21	25	11	19		2	12	90
" Russian	12	147	167	187	123	156	60	43	895
" Polish				1					1
" Austrian		6	2			4		1	13
" German		4						7	11
Italian	2	135	26	17	21	20	7	7	235
Japanese								2	2
Newfoundland						2			2
New Zealand	2	2	1	3	3		1		12
Polish, N.E.S.		6	21	2	2	4	5	1	41
" Austrian	3	3			4				10
" German		1							1
" Russian	8	38	69	20	13	4	6	5	163
Persian					1				1
Roumanian		17	18	33	4	2	16	4	94
Russian, N.E.S.	72	375	298	197	101	98	115	179	1,435
Finnish		29	25	44	39	41	49	24	251
Spanish			2	6	1	2	2		13
Swiss	1	24	8	8	5	13	8	3	70
Servian		1							1
Danish		18	10	10	2	6	6	4	56
Icelandic	5	2	10	3	2		8		30
Swedish	13	162	113	121	75	101	55	23	663
Norwegian	4	67	74	57	64	67	48	15	396
Turkish			1				1		2
Armenian				6		1	5	1	13
Syrian		3	19	27			2		51
Arabian					1		1		2
U. S. A. citizens	6	14	6	7	15	2	1	1	52
Hindoo		2	2	1			1		6
Totals	2,093	13,224	9,075	5,646	4,129	4,430	3,504	1,669	44,070

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TABLE IV.

MONTHLY arrivals of Immigrants for Canada, by Occupation and Destination, at the Port of Quebec, for the Fiscal Year ending March 31, 1909.

	April.	May.	June.	July.	August.	September.	October.	November.	Totals.
Agriculturists	656	4,369	3,063	1,636	1,134	819	736	386	12,799
General labourers.	300	1,970	1,080	617	483	388	343	260	5,441
Mechanics.	673	3,481	2,435	1,617	1,258	1,744	1,081	459	12,748
Clerks	249	1,234	891	535	485	427	343	169	4,333
Miners.	31	247	182	162	149	184	150	58	1,163
Female servants.	140	883	917	503	475	508	467	247	4,140
Not classified.	44	1,040	507	576	445	360	384	96	3,446
Totals.	2,093	13,224	9,075	5,646	4,429	4,430	3,504	1,669	44,070
Maritime Provinces.	29	209	89	118	85	90	84	27	731
Quebec	505	3,009	1,736	1,133	999	1,474	837	488	10,181
Ontario	830	4,598	2,945	2,034	1,591	1,271	1,263	506	15,038
Manitoba	338	2,335	1,715	886	661	595	411	248	7,189
Saskatchewan.	124	1,060	968	487	344	291	254	85	3,622
Alberta.	119	1,006	727	481	365	274	262	113	3,347
British Columbia.	148	998	895	507	384	433	393	202	3,960
Yukon.						2			2
Totals.	2,093	13,224	9,075	5,646	4,429	4,430	3,504	1,669	44,070

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TABLE

NATIONALITY, Sex, Occupation and Destination of Immigrant Arrivals for

	SEX.				TRADE OR								
					Farmers or Farm Labourers Class.			General Labourers.			Mechanics.		
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Males.	Females.	Children.	Males.	Females.	Children.
African, South..	12	9	9	30	6	1	2	1			4	4	4
Australian	25	11	8	44	13	3	1	2	1		6	5	5
Austrian, N. E.S.	143	57	58	258	49	13	23	49	7	9	19	15	14
Bohemian	3	5	7	15							1	1	1
Bukowinian	191	36	34	261	88	15	28	76	2	2	12	4	3
Croatian	1			1				1					
Galician	1,220	375	478	2,073	661	201	418	447	33	36	66	18	15
Hung'ry, N. E.S.	27	15	18	60	18	4	6	3	1	3	3	2	5
Belgian	164	93	86	343	63	26	42	15	4	1	28	18	15
Bulgarian	20	2		22	17	1					3		
Chinese	20			20				1					
Dutch	97	69	63	229	50	34	36	7	4	3	23	14	18
French	617	296	131	1,044	340	85	73	23	10	3	116	59	29
German, N. E.S.	246	128	121	495	97	41	63	44	11	13	68	22	32
Prussian	2			3	1								
Saxon		1	7	8		1	7						
English	9,163	7,969	6,329	23,461	3,351	1,374	1,242	1,196	689	807	2,919	2,308	2,203
Welsh	116	89	72	277	37	14	21	8	8	7	40	29	33
Scotch	3,412	3,024	1,928	8,364	1,114	377	388	355	185	221	1,347	840	863
Irish	1,037	923	443	2,408	468	108	107	133	42	61	183	126	110
West Indian	2			2	1						1		
Bermudian		1	1	2									
Greek	29	4	5	38	2			14	1	1	6		
Hebrew, N. E.S.	37	26	27	90	5	1		3			20	17	21
" Russian	248	318	329	895	41	24	22	44	18	26	135	169	191
" Polish	1			1	1								
" Austrian	4	3	6	13				2			2	2	3
" German	3	4	4	11	1	1	2				2		
Italian	201	24	10	235	21	2	2	135	5	1	18	6	4
Japanese	2			2	2								
Newfoundland	2			2									
New Zealand	7	4	1	12	4			2			1	1	1
Polish, N. E.S.	22	10	9	41	10			6	2	3	3	5	3
" Austrian	8	1	1	10	3	1	1	4			1		
" German	1			1	1								
" Russian	81	42	40	163	41	13	18	24	7	6	9	9	13
Persian	1			1				1					
Roumanian	25	36	33	94	8	6	13	3			12	13	11
Russian, N. E.S.	503	371	561	1,435	263	167	314	129	51	119	68	60	70
Finnish	102	93	56	251	15	6	10	44	20	22	15	9	15
Spanish	12	1		13							4	1	
Swiss	45	15	10	70	26	3	6	3			11	2	
Servian	1			1				1					
Danish	34	18	4	56	25	5	4	4			4	1	
Icelandic	14	12	4	30	7	5	2	2	1		3	1	
Swedish	303	198	162	663	168	71	94	76	19	23	44	17	24
Norwegian	176	121	99	396	111	36	58	35	15	19	15	13	20
Turkish	2			2							1		
Armenian	4	5	4	13	2	4	4	1			1	1	
Syrian	33	12	6	51	11			8	2	3	4	2	1
Arabian	2			2				1					
U.S.A. citizens ..	26	18	8	52	4	2	1	7		1	5	3	
Hindoo	5	1		6							1		
Totals	18,452	14,446	11,172	44,070	7,146	2,645	3,008	2,913	1,138	1,390	5,224	3,797	3,727

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V.

Canada at the Port of Quebec, for the Fiscal Year ending March 31, 1909.

OCCUPATION.										DESTINATION.									
Clerks, Traders, &c.			Miners.			Female Servants.	Not Classified.			Maritime Provinces.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Yukon.		
Males.	Females.	Children.	Males.	Females.	Children.		Males.	Females.	Children.										
.....	1	.....	.....	.....	.....	1	1	2	3	.....	3	16	1	.....	3	7	.....	
2	2	.....	.....	.....	.....	.....	2	.....	.....	.....	18	11	.....	4	3	8	.....	
5	1	1	21	7	10	13	.....	1	1	12	55	23	66	32	43	27	.....	
.....	.....	.....	2	3	5	1	.....	.....	1	.....	2	.....	3	.....	.....	10	.....	
.....	.....	.....	15	1	1	14	.....	.....	.....	5	49	42	94	50	10	11	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
1	.....	.....	42	2	1	114	3	7	8	19	258	286	854	381	245	30	.....	
.....	1	1	3	2	.....	3	.....	2	3	.....	11	12	9	23	5	.....	.....
6	3	1	47	21	21	12	5	9	6	76	96	11	110	14	21	15	.....	
.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	2	5	12	2	1	.....	.....
14	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	19	1	.....	.....	.....	.....	.....
8	3	3	.....	.....	.....	10	9	4	3	1	29	30	47	32	59	31	.....	
54	19	8	13	3	5	56	71	64	13	20	588	49	213	103	55	16	.....	
20	10	.....	10	5	8	32	7	7	5	4	117	32	161	82	56	43	.....	
.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	2	.....	.....	.....	1	.....	
1,043	874	533	191	139	191	2,012	463	573	1,353	370	4,904	9,859	2,739	1,670	1,631	2,288	.....	
13	8	3	15	7	6	18	3	5	2	1	52	70	48	15	27	64	.....	
419	367	239	163	36	53	1,070	74	149	164	117	2,048	2,671	1,311	513	674	1,028	2		
185	116	77	13	6	7	435	55	95	81	36	620	864	447	101	174	166	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	
2	2	3	.....	.....	.....	1	.....	.....	1	.....	18	14	1	.....	.....	5	.....	
8	2	6	.....	.....	.....	6	1	.....	.....	.....	70	12	5	3	.....	.....	.....
22	45	72	2	1	.....	49	4	12	18	9	374	273	196	25	4	14	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
.....	1	3	.....	.....	.....	.....	.....	.....	.....	.....	10	3	.....	.....	.....	.....	.....
.....	1	2	.....	.....	.....	2	.....	.....	.....	.....	5	6	.....	.....	.....	.....	.....
4	1	1	19	1	.....	5	4	4	2	21	161	38	4	.....	5	6	.....	
.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	1	.....	2	.....	2	2	1	3	.....	1	3	.....	
.....	.....	.....	2	1	1	1	1	1	2	4	20	4	9	3	1	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	7	1	.....	.....	.....
.....	2	.....	7	2	3	8	.....	1	.....	9	59	19	37	26	11	2	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
1	5	5	.....	.....	.....	7	1	5	4	.....	66	5	7	16	.....	.....	.....
9	14	18	23	2	5	59	11	18	35	15	266	159	514	333	122	26	.....	
1	.....	.....	27	8	6	47	.....	3	3	.....	25	171	13	1	18	23	.....	
1	.....	.....	2	.....	.....	.....	5	.....	.....	.....	10	2	1	.....	.....	.....	.....
2	2	.....	.....	.....	.....	6	3	2	4	1	29	7	15	5	3	10	.....	
.....		
1	1	.....	.....	.....	.....	11	.....	.....	.....	1	17	13	9	5	9	2	.....	
2	.....	.....	.....	.....	.....	5	.....	.....	2	.....	2	.....	25	.....	3	.....	.....
1	1	1	13	3	9	83	1	4	11	3	59	219	149	101	67	65	.....	
2	1	.....	10	.....	.....	52	3	4	2	2	41	73	58	76	91	55	.....	
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	7	.....	.....	5	.....	.....
9	6	2	.....	.....	.....	2	1	.....	.....	2	40	9	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....
7	9	6	1	.....	.....	2	2	2	.....	.....	25	11	11	3	.....	2	.....	
4	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	2	3	1	.....	.....	.....	.....
1,848	1,498	987	581	250	332	4,140	740	978	1,728	731	10,181	15,038	7,189	3,622	3,347	3,960		

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PORT OF VANCOUVER.

For the fiscal year 1908-9, there arrived at the port of Vancouver 8,651 passengers, of whom 1,755 travelled saloon and 6,896 steerage. Of the saloon passengers, 1,278 were destined to Canada and 477 to the United States. Of the steerage passengers, 5,121 were for Canada and 1,775 for the United States. Included in the steerage passengers for Canada were 1,446 returned Canadians and 2,158 tourists, leaving the immigration proper at 1,517 souls, a decrease as compared with the preceding fiscal year of 5,049 persons.

Table I. deals with the total arrivals of saloon passengers, Table II. with the total arrivals of steerage passengers, Table III. with the monthly arrivals of immigrants for Canada, and Tables IV. and V. give summaries of the information obtained from immigrants for Canada upon arrival.

TABLE I.

NATIONALITY and Sex of Saloon Passengers arriving at the Port of Vancouver, for the Fiscal Year ending March 31, 1909.

	CANADA.				UNITED STATES.				CANADA AND UNITED STATES.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
African, South.....			1	1							1	1
Australian.....	62	81	22	165	22	15	5	42	84	96	27	207
Austrian.....	2			2	1			1	3			3
Belgian.....	2			2	1			1	3			3
Chinese.....	5		1	6	5	3		8	10	3	1	14
Dutch.....	8	1		9					8	1		9
French.....	7	8		15	8	2		10	15	10		25
German.....	21	6		27	6	6		12	27	12		39
English.....	345	164	35	544	37	13	2	52	382	177	37	596
Welsh.....	2	1		3	1	1		2	3	2		5
Scotch.....	58	29	1	88	4	2		6	62	31	1	94
Irish.....	19	12		31	3	2		5	22	14		36
West Indian.....	4	1	3	8	1	1		2	5	2	3	10
Italian.....	2			2		1		1	2	1		3
Japanese.....	16	5	3	24	5	5	2	12	21	10	5	36
Newfoundland.....	1			1					1			1
New Zealand.....	37	36	3	76	9	4		13	46	40	3	89
Portuguese.....	3			3					3			3
Russian.....	5	2		7	1			1	6	2		8
Spanish.....	4			4					4			4
Swiss.....	1			1	1			1	2			2
Swedish.....	3			3	1			1	4			4
Norwegian.....		1		1		1		1		2		2
Egyptian.....	1			1					1			1
U. S. A. Citizens.....	40	18	9	67	109	120	47	276	149	138	56	343
Hindoo.....	2			2					2			2
Canadian.....	63	45	15	123	4	1	3	8	67	46	18	131
Tourist.....	38	21	3	62	13	6	3	22	51	27	6	84
Totals.....	751	431	96	1,278	232	183	62	477	583	614	158	1,755

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TABLE II.

NATIONALITY and Sex of Steerage Passengers arriving at the Port of Vancouver, for the Fiscal Year ending March 31, 1909.

	CANADA.				UNITED STATES.				CANADA AND UNITED STATES.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
African South.....					2	2	6	10	2	2	6	10
Australian.....	49	27	23	99	27	27	17	71	76	54	40	170
Austrian.....					4			4	4			4
Belgian.....	2			2					2			2
Chinese.....	978	18	78	1,074	129	4	2	135	1,107	22	80	1,209
French.....	5	2		7	1	1		2	6	3		9
German.....	4			4	1			1	5			5
English.....	86	19	5	110	23	14	1	38	106	33	6	148
Welsh.....	2	1		3	1			1	3	1		4
Scotch.....	32	8	2	42	11	2		13	43	10	2	55
Irish.....	10	5		15	7	3		10	17	8		25
West Indian.....	2	1	2	5		1		1	2	2	2	6
Greek.....	2			2					2			2
Japanese.....	30	6	1	37	25	19		44	55	25	1	81
New Zealand.....	23	11	10	44	8	5	2	15	31	16	12	59
Russian.....	51			51					51			51
Spanish.....					1			1	1			1
Swiss.....	1			1					1			1
Danish.....	3			3	2	1	4	7	5	1	4	10
Swedish.....	2			2	4			4	6			6
Syrian.....					2			2	2			2
U. S. A. citizens.....	11	5		16	64	24	8	96	75	29	8	112
Total immigration....	1,293	103	121	1,517	312	103	40	455	1,605	206	161	1,972
Returned Canadian....	1,386	31	29	1,446					1,386	31	29	1,446
Tourist.....	1,962	123	73	2,158	1,295	60	55	1,320	3,167	183	128	3,478
Totals.....	4,641	257	223	5,121	1,517	163	95	1,775	6,158	420	318	6,896

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TABLE III.

MONTHLY arrivals of Immigrants for Canada, by Nationalities, at the Port of Vancouver, for the Fiscal Year ending March 31, 1909.

	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Totals.
Australian.....	4	7	34	5	2	6	4	5	5	7	5	15	99
Belgian.....		1			1								2
Chinese.....	98	325		291	78	113	49	30	27	23	14	26	1,074
French.....		1	1		1								7
German.....		1							2			1	4
English.....	11	16	28	5	2	15	1	8	3	10	3	8	110
Welsh.....	1					1				1			3
Scotch.....	4	7	7	2	1	4		7	2	5		3	42
Irish.....	3	2	4	1	1		1	2				1	15
West Indian.....					4						1		5
Greek.....			2										2
Japanese.....	9	14	3		1	3	4		1		2		37
New Zealand.....	8	4	20		1			6			3	2	44
Russian.....			1									50	51
Swiss.....						1							1
Danish.....				1				1		1			3
Swedish.....	2												2
U.S.A. citizens.	1		4			1			2	1	4	3	16
Totals.	141	377	104	305	92	144	59	59	42	48	32	114	1,517

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TABLE IV.

MONTHLY arrivals of Immigrants for Canada, by Occupation and Destination, at the Port of Vancouver, for the Fiscal Year ending March 31, 1909.

	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Totals.
Agriculturists	15	11	12	1	1	1	1	3	...	9	1	2	57
General labourers.....	80	141	17	125	1	88	3	15	2	7	3	62	544
Mechanics	12	40	15	3	1	6	2	3	4	7	6	5	104
Clerks.....	21	151	24	152	64	34	32	20	25	15	12	11	561
Miners.....	1	4	5	1	...	3	...	...	...	2	1	7	24
Female servants .....	...	4	2	1	...	1	3	...	1	2	...	...	14
Not classified.....	12	26	29	22	25	11	18	18	10	6	9	27	213
Totals.....	141	377	104	305	92	144	59	59	42	48	32	114	1,517
Maritime Provinces	1	...	...	5	3	2	...	...	...	1	...	...	12
Quebec	8	23	...	41	14	14	8	5	2	1	4	...	120
Ontario	26	37	14	63	12	22	8	10	4	4	1	3	204
Manitoba.....	1	...	5	10	...	...	1	...	...	1	...	2	20
Saskatchewan.....	3	...	...	...	...	...	...	...	...	...	...	...	3
Alberta.....	12	1	8	...	1	1	...	3	...	8	4	3	41
British Columbia.....	90	316	77	186	62	105	42	41	36	33	23	105	1,116
Yukon.....	1	1
Totals.....	141	377	104	305	92	144	59	59	42	48	32	114	1,517

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TABLE
NATIONALITY, Sex, Occupation and Destination of Immigrant arrivals for

	SEX.				TRADE OR								
					Farmers or Farm Labourers Class.			General Labourers.			Mechanics.		
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Males.	Females.	Children.	Males.	Females.	Children.
Australian	49	27	23	99	3	2	4	14	.....	.....	10	2	...
Belgian	2	.....	.....	2	.....	.....	.....	1	.....	.....	.....	.....	.....
Chinese	978	18	78	1,074	.....	.....	.....	429	.....	6	34	.....	.....
French	5	2	.....	7	.....	.....	.....	2	.....	.....	2	.....	.....
German	4	.....	.....	4	1	.....	.....	.....	.....	.....	2	.....	.....
English	86	19	5	110	15	1	.....	15	4	.....	18	.....	.....
Welsh	2	1	.....	3	1	.....	.....	.....	.....	.....	.....	.....	.....
Scotch	32	8	2	42	7	.....	.....	6	.....	.....	9	1	1
Irish	10	5	.....	15	1	.....	.....	2	.....	.....	6	.....	.....
West Indian	2	1	2	5	.....	.....	.....	1	.....	.....	1	.....	.....
Greek	2	.....	.....	2	1	.....	.....	1	.....	.....	.....	.....	.....
Japanese	30	6	1	37	12	.....	.....	6	1	.....	1	1	1
New Zealand	23	11	10	44	3	1	2	3	.....	.....	9	.....	.....
Russian	51	.....	.....	51	.....	.....	.....	50	.....	.....	.....	.....	.....
Swiss	1	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....
Danish	3	.....	.....	3	1	.....	.....	1	.....	.....	1	.....	.....
Swedish	2	2	1
U.S.A. citizens	11	5	16	2	2	3	1
Totals	1,293	103	121	1,517	47	4	6	533	5	6	97	5	2

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V.

Canada at the Port of Vancouver, for the Fiscal Year ending March 31, 1909.

OCCUPATION.										DESTINATION.							
Clerks, Traders, &c.			Miners.			Female Servants.	Not classified.			Maritime Provinces.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Yukon.
Males.	Females.	Children.	Males.	Females.	Children.		Males.	Females.	Children.								
13	3	5	4	1	...	5	5	14	14	...	...	6	4	...	10	78	1
481	3	8	1	...	...	...	33	15	64	10	117	175	9	...	2	761	...
...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	...	...	...
18	3	...	11	...	...	...	9	9	5	2	2	16	5	2	7	4	...
6	2	...	3	...	...	...	1	...	...	...	...	...	1	...	1	76	...
1	...	...	...	...	...	...	1	2	1	...	1	2	...	...	2	39	...
...	...	...	...	...	...	...	...	4	...	...	...	1	...	...	...	12	...
7	12	1	1	2	5	...
3	2	...	3	2	6	8	3	...	1	7	33	...
1	51	...
...	1	...
...	2	...
2	1	...	1	2	3	16	...
532	16	13	23	1	...	14	61	58	94	12	120	204	20	3	41	1,116	1

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PORT OF VICTORIA.

For the fiscal year 1908-9, there arrived at the port of Victoria 4,260 passengers, of whom 395 travelled saloon and 3,865 steerage. Of the saloon passengers, 267 were destined to Canada and 128 to the United States. Of the steerage passengers, 3,285 were for Canada and 580 for the United States. Included in the steerage passengers for Canada were 1,953 returned Canadians and 30 tourists, leaving the immigration proper at 1,302 souls, a decrease as compared with the preceding fiscal year of 4,722 persons.

Table I. deals with the total arrivals of saloon passengers, Table II. with the total arrivals of steerage passengers, Table III. with the monthly arrivals of immigrants for Canada, and Tables IV. and V. give summaries of the information obtained from immigrants for Canada upon arrival.

TABLE I.

NATIONALITY and Sex of Saloon Passengers arriving at the Port of Victoria, for the Fiscal Year ending March 31, 1909.

	CANADA.				UNITED STATES.				CANADA AND UNITED STATES.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
Australian.	5	3		8	2	2		4	7	5		12
Belgian.		1		1						1		1
Chinese.	4	1	4	9					4	1	4	9
French.	1	3		4	1			1	2	3		5
German.	4			4	3			3	1			1
English.	78	45	7	130	7	3		10	85	48	7	140
Welsh.		1		1						1		1
Scotch.	12	3	4	19	2			2	14	3	4	21
Irish.	2	1		3					2	1		3
West Indian.					3	3	1	7	3	3	1	7
Japanese.	7	1		8					7	1		8
New Zealand.	1		1	2					1		1	2
Finnish.					1			1	1			1
Spanish.	1			1	1			1	2			2
Danish.					2			2	2			2
Swedish.	1			1	3			3	4			4
Norwegian.					1			1	1			1
U.S.A. citizens.	6	4		10	45	39	6	90	51	43	6	100
Canadian.	21	12	13	46	2			2	23	12	13	48
Tourist.	1	6		7	1			1	15	6		21
Totals.	157	81	29	267	74	47	7	128	231	128	36	395

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TABLE II.

NATIONALITY and Sex of Steerage Passengers arriving at the Port of Victoria, for the Fiscal Year ending March 31, 1909.

	CANADA.				UNITED STATES.				CANADA AND UNITED STATES.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
African, South.....	....	1	1	2	1	....	7	8	1	1	8	10
Australian.....	4	4	6	14	55	53	16	124	59	57	22	138
Austrian, N.E.S.....	....	....	....	....	4	....	....	4	4	....	....	4
Bohemian.....	....	....	....	....	....	1	....	1	....	1	....	1
Belgian.....	....	....	....	....	2	....	....	2	2	....	....	2
Chinese.....	681	18	78	777	1	....	....	1	682	18	78	778
Dutch.....	....	....	....	....	1	....	....	1	1	....	....	1
French.....	....	....	....	....	4	....	....	4	4	....	....	4
German, N.E.S.....	....	....	....	....	21	6	....	27	21	6	....	27
Saxon.....	....	....	....	....	1	....	....	1	1	....	....	1
English.....	31	6	3	40	45	24	....	69	76	30	3	109
Welsh.....	....	....	....	....	2	....	....	2	2	....	....	2
Scotch.....	5	1	....	6	13	5	....	18	18	6	....	24
Irish.....	1	....	....	1	10	4	....	14	11	4	....	15
West Indian.....	....	1	....	1	1	2	3	6	1	3	3	7
Greek.....	....	....	....	....	2	....	....	2	2	....	....	2
Italian.....	1	....	....	1	6	2	1	9	7	2	1	10
Japanese.....	277	147	29	453	....	....	....	....	277	147	29	453
New Zealand.....	2	2	1	5	24	6	2	32	26	8	3	37
Portuguese.....	....	....	....	....	1	....	....	1	1	....	....	1
Polish.....	....	....	....	....	2	....	....	2	2	....	....	2
Roumanian.....	....	....	....	....	1	....	....	1	1	....	....	1
Russian.....	....	....	....	....	2	2	....	4	2	2	....	4
Spanish.....	....	....	....	....	2	1	....	3	2	1	....	3
Swiss.....	....	1	....	1	1	....	....	1	1	1	....	2
Danish.....	....	....	....	....	7	1	....	8	7	1	....	8
Swedish.....	....	....	....	....	6	2	....	8	6	2	....	8
Norwegian.....	....	....	....	....	3	1	....	4	3	1	....	4
Turkish.....	....	....	....	....	1	....	....	1	1	....	....	1
U.S.A. citizens.....	1	....	....	1	94	36	38	168	95	36	38	169
Total immigration.....	1,003	181	118	1,302	313	146	67	526	1,316	327	185	1,828
Returned Canadian.....	1,921	19	13	1,953	....	....	....	....	1,921	19	13	1,953
Tourist.....	25	5	30	24	18	12	54	49	23	12	84
Totals.....	2,949	205	131	3,285	337	164	79	580	3,286	369	210	3,865

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TABLE III.

MONTHLY arrivals of Immigrants for Canada, by Nationalities, at the Port of Victoria, for the Fiscal Year ending March 31, 1909.

	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Totals.
African, South.											2		2
Australian.		1	2	4				5					14
Chinese.	100	119	152	124	103	10	37	48	31	21	7	25	777
English.	1	2	17	2		5		2	1	1	3	6	40
Scotch.	1	1	1			1				1	1		6
Irish				1									1
West Indian.			1										1
Italian			1										1
Japanese	142	99	48	39	26	16	27	10	15	11	11	9	453
New Zealand.	1		2			2							5
Swiss.										1			1
U. S. A. citizens						1							1
Totals.	245	222	224	170	129	39	64	63	47	35	24	40	1,302

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TABLE IV.

MONTHLY arrivals of Immigrants, for Canada, by Occupation and Destination, at the Port of Victoria, for the Fiscal Year ending March 31, 1909.

	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Totals.
Agriculturists.....	36	30	5	4	10	2	1	...	1	1	...	...	90
General labourers.....	117	40	16	41	14	9	6	1	3	3	9	9	268
Mechanics.....	13	4	8	2	6	8	...	1	2	1	2	2	53
Clerks.....	46	110	138	89	57	3	37	43	24	19	5	15	586
Miners.....	...	...	1	...	...	...	...	2	...	...	1	1	5
Female servants . . .	1	...	2	...	1	1	...	...	...	...	...	...	5
Not classified	32	35	54	34	41	16	20	16	17	11	7	12	295
Totals.....	245	222	224	170	129	39	64	63	47	35	24	40	1,302
Maritime Provinces.....	...	...	...	...	...	...	...	...	...	...	...	...	...
Quebec . . . . .	...	...	...	...	...	...	...	...	1	...	...	...	1
Ontario . . . . .	...	...	...	...	...	...	1	...	...	...	...	...	1
Manitoba.....	...	...	...	...	...	...	...	...	...	...	...	1	1
Saskatchewan.....	...	...	...	...	...	...	...	...	...	...	...	...	...
Alberta.....	...	...	...	...	...	1	2	...	...	...	...	...	3
British Columbia.	245	222	224	170	129	38	61	63	46	35	24	39	1,296
Totals.....	245	222	224	170	129	39	64	63	47	35	24	40	1,302

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TABLE
NATIONALITY, Sex, Occupation and Destination of Immigrant Arrivals for

	SEX.				TRADE OR								
					Farmers or Farm Labourers Class.			General Labourers.			Mechanics.		
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Males.	Females.	Children.	Males.	Females.	Children.
African, South.		1	1	2									
Australian	4	4	6	14							2	1	2
Chinese	681	18	78	777	23		1	113		2	12		2
English	31	6	3	40	1	1	2	1			11	1	
Scotch	5	1		6				2			1		
Irish	1			1									
West Indian		1		1									
Italian	1			1									
Japanese	277	147	29	453	55	6	1	123	21	6	16	2	
New Zealand	2	2	1	5							1		
Swiss		1		1								1	
U.S.A. citizens.	1			1									
Totals . . .	1,003	181	118	1,302	79	7	4	239	21	8	43	5	5

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V.

Canada at the Port of Victoria, for the Fiscal Year ending March 31, 1909.

OCCUPATION.										DESTINATION.						
Clerks, Traders, &c.			Miners.			Female Servants.	Not Classified.			Maritime Provinces.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.
Males.	Females.	Children.	Males.	Females.	Children.		Males.	Females.	Children.							
.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	2
.....	.....	.....	.....	.....	.....	.....	.....	3	4	.....	.....	.....	.....	.....	.....	14
478	4	25	.....	.....	.....	.....	55	14	47	.....	.....	.....	.....	.....	.....	777
8	2	1	7	2	1	39
.....	2	1	5
.....	1	1
.....	1
1	1
56	10	3	27	105	22	1	1	2	449
.....	1	1	1	1	5
.....	1
1	1
544	16	26	5	5	93	127	75	...	1	1	1	...	3	1,296

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UNITED STATES PORTS.

For the fiscal year 1908-9, there arrived in Canada, via ports in the United States, 11,267 passengers, of whom 167 travelled saloon and 11,100 steerage. Included in the steerage passengers were 270 returned Canadians and 13 tourists, leaving the immigration proper at 10,817 souls, a decrease as compared with the preceding fiscal year of 18,491 persons.

Table I. deals with the total arrivals of saloon passengers, Table II. with the total arrivals of steerage passengers, Table III. with the monthly arrivals of immigrants, and Tables IV. and V. give summaries of the information obtained from immigrants upon arrival.

TABLE I.

NATIONALITY and Sex of Saloon Passengers for Canada, via Ports in the United States, for the Fiscal Year ending March 31, 1909.

	CANADA.			
	Males.	Females.	Children.	Totals.
African, South.....		1		1
French.....		1		1
English.....	16	13	3	32
Scotch.....	4	3		7
Irish.....		1		1
West Indian.....	6	5	3	14
Jamaican.....	3			3
Italian.....	2			2
Negro.....	1			1
Canadian.....	41	58	6	105
Totals.....	73	82	12	167

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TABLE II.

NATIONALITY and Sex of Steerage Passengers for Canada, via Ports in the United States, for the Fiscal Year ending March 31, 1909.

	CANADA.			
	Males.	Females.	Children.	Totals.
African, South.....	4	2	2	8
Australian.....	2	1	.....	3
Austrian, N.E.S.....	907	205	165	1,277
Bohemian.....	3	1	.....	4
Dalmatian.....	.....	1	.....	1
Hungarian, N.E.S.....	314	69	47	430
Magyar.....	.....	1	3	4
Ruthenian.....	116	4	2	122
Belgian.....	47	30	20	97
Bulgarian.....	7	1	.....	8
Brazilian.....	.....	.....	4	4
Dutch.....	44	31	27	102
French.....	141	62	8	211
German, N.E.S.....	158	104	106	368
Prussian.....	1	.....	.....	1
English.....	876	506	507	1,889
Welsh.....	17	4	3	24
Scotch.....	184	138	32	354
Irish.....	129	117	23	269
West Indian.....	12	8	1	21
Bermudian.....	1	3	.....	4
Jamaican.....	15	8	.....	23
Greek.....	92	8	6	106
Hebrew, N.E.S.....	5	9	12	26
" Russian.....	32	33	36	101
" Austrian.....	2	1	2	5
Italian.....	3,046	359	251	3,656
Newfoundland.....	.....	.....	1	1
New Zealand.....	1	.....	.....	1
Portuguese.....	1	.....	.....	1
Polish, N.E.S.....	2	1	2	5
" Austrian.....	32	.....	.....	32
" Russian.....	2	4	8	14
Roumanian.....	43	19	14	76
Russian, N.E.S.....	385	250	291	926
Finnish.....	29	5	4	38
Spanish.....	9	1	5	15
Swiss.....	15	7	1	23
Danish.....	22	14	4	40
Swedish.....	77	37	17	131
Norwegian.....	72	24	21	117
Turkish.....	197	29	13	239
Armenian.....	7	.....	.....	7
Egyptian.....	1	.....	.....	1
Syrian.....	22	10	6	38
Arabian.....	.....	1	.....	1
U.S.A. citizens.....	1	.....	.....	2
Total immigration.....	7,073	2,100	1,644	10,817
Returned Canadian.....	199	53	18	270
Tourist.....	8	5	13
Totals.....	7,280	2,158	1,662	11,100

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TABLE III.

MONTHLY arrivals of Immigrants for Canada, by Nationalities, via Ports in the United States, for the Fiscal Year ending March 31, 1909.

	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Totals.
African, South...		1		1	1	2				2	1		8
Australian...							1	12					3
Austrian, N.E.S.	451	173	107	48	39	39	87	85	52	39	45	112	1,277
Bohemian...		2						1		1			4
Dalmatian...		1											1
Hungarian, N.E.S.	67	31	28	16	11	22	29	22	28	37	52	87	430
Magyar...	4												4
Ruthenian...	122												122
Belgian...	34	13	8		7	5	4	2	7	2	7	8	97
Bulgarian...			1		1			12	1			3	8
Brazilian...													4
Dutch...	30	1	9	1	5	8	3	5	8	4	2	26	102
French...	45	24	18	16	15	22	12	9	4	14	9	23	211
German, N.E.S.	91	30	25	35	31	21	21	16	12	22	7	57	368
Prussian...		1											1
English...	788	115	72	52	59	33	63	39	61	85	76	446	1,889
Welsh...	11	4	1			1	1		2	1	1	2	24
Scotch...	73	20	17	23	8	8	10	5	31	29	33	97	354
Irish...	80	32	15	11	12	18	18	3	21	10	13	36	269
West Indian...		7	1	4	1	5		1				2	21
Bermudian...					1						1	2	4
Jamaican...	3	1	8			3	6					2	23
Greek...	24	12	4	7	13	3	1	2	15	1		24	106
Hebrew, N.E.S.	8	1							2	15			26
" Russian...	36						1		18		28	18	101
" Austrian...	5												5
Italian...	1,035	852	172	67	86	95	116	104	116	66	241	706	3,656
Newfoundland...		1											1
New Zealand...				1									1
Portuguese...	1												1
Polish, N.E.S.												5	5
" Austrian...	32												32
" Russian...												14	14
Routmanian...	3	17	9			10	4	3	20		5	5	76
Russian, N.E.S.	127	91	33	80	55	94	57	113	89	51	37	99	926
Finnish...	2		3				3	2	1		16	11	38
Spanish...	5			1		2	7						15
Swiss...	3	4	4	3		2	4		2			1	23
Danish...	5	7	2	3	6	1	1		1	1	4	8	40
Swedish...	15	30	4	2	9	5	27	9	5	4	10	11	131
Norwegian...	30	8	9	7		12	7	3	3	16	5	18	117
Turkish...	4	36	5	5	1	9	30	17	11	13	27	72	230
Armenian...	4							1		1	1		7
Egyptian...					1								1
Syrian...	1		7		4	7	13		1	5			38
Arabian...								1					1
U. S. A. citizens	1											1	2
Totals...	3,140	1,515	563	383	366	427	526	447	511	418	621	1,900	10,817

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TABLE IV.

MONTHLY arrivals of Immigrants for Canada, by Occupation and Destination, via Ports in the United States, for the Fiscal Year ending March 31, 1909.

	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Totals.
Agriculturists	1,019	544	134	90	107	111	160	119	135	113	202	652	3,386
General labourers	1,098	493	151	66	41	71	73	107	112	78	217	917	3,424
Mechanics	449	131	52	50	32	33	45	25	57	42	61	114	1,091
Clerks	124	60	63	56	45	22	48	25	31	49	43	60	626
Miners	30	9	9	2	5	1	7	2	7	14	24	22	132
Female servants	152	50	26	28	25	33	38	34	58	49	38	71	602
Not classified	268	228	128	91	111	156	155	135	111	73	36	64	1,556
Totals	3,140	1,515	563	383	366	427	526	447	511	418	621	1,900	10,817
Maritime Provinces	19	23	21	18	16	10	14	18	18	10	24	10	201
Quebec	1,041	497	147	69	82	87	112	77	148	92	185	469	3,006
Ontario	1,284	634	209	116	124	164	163	151	158	142	232	918	4,295
Manitoba	352	149	75	54	35	38	59	70	58	54	41	136	1,121
Saskatchewan	131	39	28	48	43	54	59	58	44	26	16	77	625
Alberta	114	56	27	26	35	24	59	24	22	21	37	120	566
British Columbia	199	117	56	52	31	50	60	49	63	72	86	168	1,003
Totals	3,140	1,515	563	383	366	427	526	447	511	418	621	1,900	10,817

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TABLE

NATIONALITY, Sex, Occupation and Destination of Immigrant arrivals for Canada,

	SEX.				TRADE OR								
					Farmers or Farm Labourers Class.			General Labourers.			Mechanics.		
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Males.	Females.	Children.	Males.	Females.	Children.
African, South.....	4	2	2	8						1	1		
Australian.....	2	1		3							1		
Austrian, N.E.S.....	967	205	165	1,277	495	51	54	360	19	39	33	8	4
Bohemian.....	3	1		4									
Dalmatian.....		1		1		1							
Hungarian, N.E.S.....	314	69	47	430	265	27	18	35	2	1	12	1	
Magyar.....		1	3	4									
Ruthenian.....	116	4	2	122	112	2	2				4		
Belgian.....	47	30	20	97	17	2	2	7	4	1	1	5	4
Bulgarian.....	7	1		8	1			5			1		
Brazilian.....			4	4									
Dutch.....	44	31	27	102	25	6	15	2	1		7	3	2
French.....	141	62	8	211	37	7		19	3	1	25	4	1
German, N.E.S.....	158	104	106	368	53	19	38	18	10	8	37	12	10
Prussian.....	1			1	1								
English.....	876	506	507	1,889	168	34	46	174	60	273	238	90	102
Welsh.....	17	4	3	24	4	1	3	3			5	1	
Scotch.....	184	138	32	354	30	3		21	3	3	42	15	3
Irish.....	129	117	23	269	11	4	1	28	8	12	21	3	
West Indian.....	12	8	1	21	1			1	1	1	2		
Bermudian.....	1	3		4									
Jamaican.....	15	8		23							2		
Greek.....	92	8	6	106	17			68	4	3	4	1	1
Hebrew, N.E.S.....	5	9	12	26				1			3	5	8
" Russian.....	32	33	36	101	1	1	4	12	3	9	17	15	7
" Austrian.....	2	1	2	5									
Italian.....	3,046	359	251	3,656	1,155	43	36	1,639	50	43	156	12	7
Newfoundland.....			1	1									
New Zealand.....	1			1									
Portuguese.....	1			1									
Polish, N.E.S.....	2	1	2	5				2	1	2			
" Austrian.....	32			32	25			6			1		
" Russian.....	2	4	8	14	2	4	8						
Roumanian.....	43	19	14	76	8	4	1	27	3	3	3	2	1
Russian, N.E.S.....	385	250	291	926	208	57	95	110	20	26	48	35	15
Finnish.....	29	5	4	38				23	4	3	1		
Spanish.....	9	1	5	15				4			1		
Swiss.....	15	7	1	23	5			1			2		
Danish.....	22	14	4	40	10			6			3	1	
Swedish.....	77	37	17	131	14	3	4	45	3		11	4	1
Norwegian.....	72	24	21	117	12	3	7	51	3	11	6	1	
Turkish.....	197	20	13	230	84	2	2	97	4	2	9		1
Armenian.....	7			7	1			6					
Egyptian.....	1			1				1					
Syrian.....	22	10	6	38	12		2	1			3		
Arabian.....		1		1									
U. S. A. citizens.....	1	1		2									
Totals.	7,073	2,100	1,644	10,817	2,774	274	338	2,773	206	445	706	218	167

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V.
via Ports in the United States, for the Fiscal Year ending March 31, 1909.

OCCUPATION.										DESTINATION.						
Clerks, Traders, &c.			Miners.			Female Servants.	Not Classified.			Maritime Provinces.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.
Males.	Females.	Children.	Males.	Females.	Children.		Males.	Females.	Children.							
1	1	1				1	2				2	1	2			3
1								1					2			1
16	5	2				63	3	59	66	21	458	277	349	51	86	35
			3			1									2	2
1		1				12	1	27	27	30	17	129	45	54	50	105
								1	3					4		
						1		1			87	18	16		1	
6	1		6	6	7	3	4	9	6	4	33	15	12	8	1	24
	1										3	5				
									4					4		
5	2	1				6	5	13	9		15	21	35	12	2	17
22	2		2			9	36	37	6	1	117	35	33	10	7	8
31	8	9	4			22	15	33	41	3	42	75	57	78	86	27
													1			
187	45	17	13	5	6	133	96	139	63	19	265	1,125	204	73	78	125
2			1			1	2	1			1	16		3	3	1
61	7		7	1		75	23	34	26	7	100	163	24	13	6	43
47	6		1	2		72	21	22	10	8	81	103	35	10	20	12
2	1					3	6	3			5	16				
							1	3			1	3				
1							12	8			5	18				
3						2		1	2		42	50	1		1	12
1						2		2	1	1	2	11	12			
	4	11				3	2	7	5		28	39	29	4		1
2	1					1			1			5				
27	4	4	51	1	4	88	18	161	157	70	1,313	1,622	78	8	117	448
									1	1						
1							1					1				
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											16	12	4			5
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3						4	2	6	9		47	21	4	4	2	1
17	6	5	1	1		53	1	78	150	24	218	248	126	232	50	28
								1	1		1	29	1	4	1	2
4	1	5									10	5				
3	1	1	1			2	3	4			8	5	3		5	2
23						9	1	4	4		5	8	9	11	3	4
5	1		1			18	1	8	12		6	26	29	20	20	30
2	2					8	1	7	3	5	9	12	9	22	24	36
3	1		3			9	1	4	8	3	56	146			1	24
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6	6	1				1		3	3	5	11	16				6
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462	105	59	99	16	17	602	259	679	618	201	3,006	4,295	1,121	625	566	1,003

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STATEMENT showing the number of Immigrants debarred at Ocean ports since December, 1902, when the Medical Act went into force, also the number held for further inspection.

	No. held for further inspection.	No. rejected.
Fiscal year 1902-1903.....	273	273
" 1903-1904.....	1,835	274
" 1904-1905.....	2,559	611
" 1905-1906.....	3,570	524
" 1906-1907.....	3,543	440
" 1907-1908.....	4,573	1,172
" 1908-1909.....	3,544	509
Totals	19,897	3,803

Inspection of Immigrants seeking admission to Canada from the United States was begun in April, 1908, and during the fiscal year 1908-1909, 4,580 intending immigrants were debarred.

STATEMENT showing the number of Immigrants who were deported, that is, Immigrants who passed inspection and who afterwards became a public charge in one way or another, and were returned to the country from which they came, during 1902-3, 1903-4, 1904-5, 1905-6, fractional fiscal year (9 mos.) 1906-7, 1907-8 and 1908-9.

English.....	2,007
Scotch.....	206
American.....	149
Bulgarian.....	137
Irish.....	81
Russian, N.E.S.....	56
Galician.....	49
Roumanian.....	44
Hebrew, N.E.S.....	40
Swedish.....	33
Greek.....	32
Italian.....	31
Hindoo.....	29
Norwegian.....	29
French.....	26
Dutch.....	22
Hebrew, Russian.....	21
Turkish.....	20
Austrian, N.E.S.....	20
Danish.....	17
German.....	15
Finnish.....	14
Welsh.....	9
Bukowinian.....	9
Hungarian.....	8
Icelandic.....	8
Japanese.....	4
Belgian.....	3
Bohemian.....	3
West Indian.....	3
Polish, Russian.....	3
Polish, N.E.S.....	2

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Australian....	2
Chinese..	2
Swiss.....	2
Syrian....	2
Hebrew, Austrian....	2
South African....	1
Deukhobor....	1
Hebrew, German....	1
Hebrew, Polish....	1
Newfoundland..	1
Negro..	1
Jamaican....	1
Ruthenian....	1
Spanish....	1
Total..	3,149

STATEMENT showing the number of Immigrants deported since December, 1902, by
Years.

Fiscal year 1902-03....	67
" 1903-04....	85
" 1904-05....	86
" 1905-06....	137
" 1906-07....	201
" 1907-08....	825
" 1908-09....	1,748
Total....	3,149

The following is a statement showing Immigration literature, &c., ordered during
the year :—

	Copies.
L'Alberta Nord....	20,000
Land Regulations in Canada....	100,000
Nova Scotia pamphlet..	35,000
Eastern Townships of Quebec..	20,000
Mercantile and Financial Times..	500
Canadian Courier....	25,000
Immigration Act (English)..	10,000
Immigration Act (French)....	5,000
Calendar 'Welcome Stranger'....	50,000
Canada West Magazine..	10,000
British Columbia pamphlet..	20,000
Danish pamphlets..	1,500
Opportunities in Canada..	20,000
Prince Edward Is'and pamphlet..	10,000
Post Cards (French)....	100,000
La Colombie Britannique....	200
Grand Trunk Pacific folder Map....	60,000
A trip through Canada by Scottish Agriculturists.,	200
Homestead Regulation Sheets..	70,000
Canada the Land of Opportunity....	110,000
Agriculture tour through Canada..	100,000

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Classes wanted in Canada.. . . .	100,000
Alberta Red winter wheat.. . . .	100,000
East Indians in British Columbia.. . . .	2,000
Canada as it appeared to Scottish Agriculturists.. . . .	100,000
New Brunswick pamphlet.. . . .	10,000
Thunder Bay and Rainy River District.. . . .	5,000
Prosperity follows Settlement.. . . .	100,000
Canadian Life and Resources.. . . .	6,000
Atlas of Canada (English).. . . .	178,000
Atlas of Canada (Bound, English).. . . .	6,000
“ “ (French).. . . .	55,000
“ “ (Bound).. . . .	3,000
“ “ (Flemish).. . . .	10,000
“ “ (Dutch).. . . .	10,000
‘Last Best West’ (English).. . . .	252,500
“ (French).. . . .	25,000

MAPS.

School maps (English).. . . .	5,000
“ (French).. . . .	5,000
Pre-Emption maps.. . . .	88,000
Small Dominion of Canada map.. . . .	6,000
Nova Scotia map.. . . .	10,000
New Brunswick map.. . . .	10,000
Prince Edward Island.. . . .	10,000
British Columbia.. . . .	10,000

NEWSPAPERS.

Saskatoon <i>Phoenix</i>	13,500
Vermilion <i>Signal</i>	3,000
<i>The Canada Posten</i> (Swedish).. . . .	5,000
<i>Canadian Hungarian</i>	15,000
<i>Der Nordwesten</i>	26,000
“ Special Edition.. . . .	50,000
<i>Christmas Globe</i>	200
Saskatchewan <i>Courier</i>	15,580
“ “ Special.. . . .	5,000
Vegreville <i>Observer</i>	2,500
<i>Canada Scotsman</i>	5,000
Alberta <i>Herold</i> (German).. . . .	26,000
<i>Canada</i> (Swedish weekly).. . . .	24,000
<i>Danebrog</i>	12,000
<i>Logberg</i> (Icelandic).. . . .	26,000
<i>Le Nouvelliste</i>	1,000
Lethbridge <i>Herald</i>	1,000

One hundred and eighty-six thousand two hundred and seventy-nine pieces of mail were received and attended to in my office during the fiscal year, an increase of 23,164 upon the figure for the previous fiscal year; 315,006 requests for information, direct and indirect, were received and attended to.

Your obedient servant,

W. D. SCOTT,
Superintendent of Immigration.

OPERATIONS IN EUROPE.

No. 1.

REPORT OF J. OBED SMITH.

11 AND 12 CHARING CROSS,

LONDON. S.W., April 2, 1909.

The Right Honourable

LORD STRATHCONA AND MOUNT ROYAL, G.C.M.G.,

High Commissioner for Canada,

17 Victoria Street, S.W.

MY LORD,—I have the honour to submit the report of the Emigration Branch of the Department of the Interior, covering the agencies in the United Kingdom and the agency at Antwerp, in Belgium, for the fiscal year ending March 31, 1909, together with the individual reports of the various emigration agents for the same period.

As the result of personal inspections of the various agency premises during the past year, I am able to state with confidence that they are suitably situated, easily accessible to the public, and generally well adapted for the purposes of this branch of the department. I would, however, recommend that, on the expiry of the present lease of the Liverpool agency office, steps be taken to secure premises on the street level of a public thoroughfare, with ample window space for the display of exhibits, &c., which principle has been adopted in all the other agencies with marked success.

A striking feature in connection with the emigration propaganda during the past year has been the constantly changing displays of products and exhibits in the various agencies of the department, at large and small agricultural shows and fairs, at many small county exhibitions; and, as far as the stock would permit, miniature displays in the offices of a large number of booking agents throughout the country. This feature in my opinion is one capable of considerable extension with profitable results to the Dominion, and although the supply of suitable display material in the past has been large, I would respectfully recommend that it be largely increased in the future. In this connection I venture to believe that Canada has now reached a position in the knowledge of British people and others that her capacity to grow the finest wheat is established and admitted to be a fact, and while this prime object of our emigration work must ever be kept to the front, there are other branches of agriculture and kindred industries from which substantial, attractive and suitable exhibits could be made with great advantage.

The adopted programme of advertising in the country and provincial papers, in preference to the large and expensive city journals, has been continued and extended during the past year. Our agents are constantly on the watch for a newspaper that reaches the class of emigrants most sought after by Canada, and it is gratifying to note that practically without exception the provincial press in the British isles is now favourably disposed towards Canada. Perhaps some exception might be made to this statement in some parts of Ireland, where there is a strong feeling against any attempt to emigrate people from those districts, but in all other parts of the British isles Canada has so established her reputation, that the next step of developing emigration and trade, as a result of that knowledge, becomes natural and easy.

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During the past twelve months our exhibition motor cars have travelled from the south of England to the north of Scotland, calling at hundreds of small country villages and school-houses, and distributing literature and information at all points. In addition, the exhibition horse-wagons have covered very effectually several large districts that are more or less inaccessible or inconvenient for motor cars. I cannot too strongly recommend the continuance and extension of this desirable missionary work.

On April 15, 1908, there became effective an order in council, approved by His Excellency the Governor General on February 25, 1908, as follows :—

‘On a memorandum, dated February 20, 1908, from the Minister of the Interior, stating that a very considerable number of emigrants arriving in Canada from the British isles have either been rejected at Canadian ports or afterwards deported from Canada as undesirables, for causes named in the Immigration Act ;

‘That during the year 1907 there were some 141 rejections and 441 deportations of British emigrants ;

‘That among the many charitable and philanthropic associations actively engaged in the British isles in sending and financially assisting immigrants to Canada are some whose work is chiefly among the unemployed, destitute and incompetent classes in the congested centres of population.

‘While the minister does not contend that some of these immigrants may not make successful citizens of Canada, nevertheless it is true that it is not the object of these associations to encourage the immigration of the really competent, industrious and ambitious man so long as he succeeds in supporting himself, and that their operations are confined almost exclusively to the class from which it is very unlikely that the needs of Canada can be properly supplied.

‘The class referred to includes not only the unemployed but a large proportion of those who are a drag in the labour market from misfortune, incompetence or indifference. In the case of these it is no alleviation of their condition to transfer them here, because our experience is that they simply continue in the same condition, and are a detriment to Canada.

‘While the associations engaged in this work often claim, and perhaps endeavour to use discrimination in the matter of selection, in effect it is found that emigrants are sent here who are entirely unsuited to the conditions prevailing in this country, and who are unlikely to succeed even under the most favourable circumstances.

‘The work of these associations does not come under the supervision of the Canadian Immigration Department in the British isles, and it is very advisable that more effective measures should be adopted, supervisory and restrictive, in regard to the undesirable classes.

‘It might be mentioned that the Department of the Interior exercises a degree of supervision over a certain very limited class of immigrants, who are sent out by the Poor Law Guardians. If the guardians of a district are satisfied that a person, who has been a charge on them, is really capable of working his way in Canada, or elsewhere, under new conditions, and with a fair start, they secure an appropriation from public moneys for the purpose of the emigration of such person. When an emigrant is sent out in this way, it is imperative that the consent of the assistant superintendent of emigration for Canada be obtained. In this way the department exercises some control. Independent inquiry is made, a medical certificate is obtained, and other precautions taken to make sure of the suitability of the emigrant.

‘The minister is of the opinion that a similar system of inspection should be extended to all charitable and philanthropic societies or organizations operating in England, whether using public money or funds provided by public generosity so that persons whom they propose sending to Canada may be subject to inspection by the officer representing the Canadian Government Emigration Department in London, as to their antecedents, both morally and physically, and as to their general suitability

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for settlement in Canada; such persons to be allowed entry into Canada only upon presentation of a proper certificate from the assistant superintendent of emigration; and to be subject to exclusion and deportation in the usual way, should they succeed in gaining admittance to Canada in contravention of the regulations.

'The Immigration Act (Sec. 10) provides that—

"The Governor in Council may on the recommendation of the minister, make such orders and regulations, not inconsistent with this Act, as are considered necessary or expedient for the carrying out of this Act according to its true intent and meaning and for the better attainment of its objects."

'The minister, therefore, recommends that an order in council be passed prohibiting, from and after the fifteenth day of April, 1908, the landing in Canada of any person whose passage has been paid, wholly or in part, by any charitable organization or out of public moneys, unless it is shown that the authority in writing of the assistant superintendent of emigration for Canada in London, has been obtained for the emigration of such person, and that such authority has been acted upon within a period of sixty days.

'The committee submit the same for approval.

'RODOLPHE BOUDREAU,

'Clerk of the Privy Council.'

'The Honourable

'The Minister of the Interior.'

This was followed by a general circular from the department on May 12, 1908, as follows:—

'IMMIGRATION BRANCH,

'DEPARTMENT OF THE INTERIOR,

'OTTAWA, CANADA, May 12, 1908.

'Notice is hereby given that the only classes of immigrants wanted in Canada at the present time are experienced farm labourers, farmers financially able to take homesteads or purchase lands, and female domestic servants.

'The demand for railway labour is filled for this season.

'All concerned are requested to note the above carefully, and also to note that the regulation now in operation in Canada requiring every immigrant 18 years of age or over, to have in his possession at least \$25 cash at time of landing, besides ticket to destination, will be enforced strictly and impartially in the case of all immigrants outside of the classes above mentioned.

'W. D. SCOTT,

'Superintendent of Immigration.'

An order in council approved by His Excellency the Governor General on September 11, 1908, became operative and is as follows:—

'PRIVY COUNCIL, CANADA,

'At the Government House at Ottawa,

'FRIDAY, the 11th day of September, 1908.

'Present,

'His Excellency the Governor General in Council.

'His Excellency the Governor General in Council, in virtue of the provisions of section 20 of the Immigration Act, chapter 93, Revised Statutes of Canada, 1906, is pleased in view of the labour conditions and of the probable supply and demand for labourers in Canada during the coming winter, to order and it is hereby ordered that in the case of immigrants arriving at Canadian ports between the 1st day of January and 15th day of February, 1909, the immigration agent at any port shall require every immigrant, male or female, 18 years of age or over, to have

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in his or her possession money to the minimum amount of \$50, in addition to a ticket to his or her destination in Canada, unless satisfactory evidence is furnished that the immigrant is going to some definite employment, or to relative or friends already settled in Canada who would take care of such immigrant and that on the last mentioned date the money qualification above prescribed be reduced to the minimum amount of \$25 for each immigrant and so remain until further ordered.

‘RODOLPHE BOUDREAU,

Clerk of the Privy Council.

‘The Honourable

‘The Minister of the Interior.’

The evident intention of the above mentioned regulations has, in my opinion, been effected. Though there was a tendency in some quarters to construe these regulations as wholesale restrictions, and an indication that Canada wanted no more emigrants, subsequent facts clearly show that during the last fiscal year Canada received as many emigrants as she required, and who could be suitably settled in the Dominion, and the percentage of undesirables was reduced to a minimum.

In this connection I am pleased to be able to report that the various emigration societies especially affected by the order in council of the 25th February, 1908, have, without exception, loyally accepted the conditions imposed by the said order in council, and while realizing the duty of this office to strictly carry out these regulations, the method of doing so did not necessarily tend to prejudice the existence or continuance of such societies’ propaganda. The societies in question undoubtedly sent much diminished numbers to Canada, and their funds were appreciably diminished accordingly, but their officers speedily realized that the regulations were imposed not only as a safeguard against undesirable and unsuitable persons being admitted to Canada, but it was actually to the advantage of such intending emigrants as were rejected that they should know by the personal selection carried on through this office that there was little or no chance of their succeeding in Canada.

The above regulations of 1908, together with the general trade conditions, unquestionably affected the number of emigrants leaving these shores; but while the number is less, I submit that the figures are not in the least disappointing, especially when they convey the fact that the number was sufficient for Canada’s needs during the year, and that the undesirable element had been eliminated to a great extent.

During the past fiscal year other portions of the British empire have entered the emigration field in active competition with Canada. The province of Ontario has opened a separate office in the city of London, and their officers very heartily co-operate with us in all necessary business matters. But some states of the Australian Commonwealth not only offer a bonus to booking agents, but on certain conditions give assisted passages to intending emigrants, and while the number that such states of the commonwealth can take each year is relatively small, yet there is a competition which has to be met, and after discussing the matter at length with our various agents, and with many booking agents, and discussing conditions under which work has to be undertaken to secure the desirable class required by Canada, I am firmly of the opinion that the payment of bonuses to licensed booking agents should be continued without change.

During the year our agents have continued the inspection of booking agents, and the reports have been placed on file with the department at Ottawa from time to time.

The continuance of the policy of sending successful farmer delegates to tell their personal story of success has been productive of excellent results throughout the British isles, and I am of the opinion that the policy in question should be continued next season. Strive as the department does to prepare literature absolutely correct in every detail, there, is perhaps owing to competition from other colonies, a lingering opinion among intending emigrants that government literature requires to be for-

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tified by the personal opinion of some actual settler or farmer from Canada, with whom they can converse. The type of farmer delegate sent during the past year has been all that could be desired.

The demand from school children for the School Atlas has been very great during the past year, and it has been the ambition of agents to cultivate the personal application of school children for this valuable adjunct to their education. The Wall Map of Canada, which was a splendid advertisement by its free distribution to schools, should, in my opinion, be followed by a pictorial chart, similar in size and displaying by illustrations and reading matter the principal resources of Canada. These I feel satisfied would be very heartily welcomed by the many thousands of school-masters throughout the British isles as a method of educating the children.

While it is self-evident that the magnificent display provided by the Canadian government at the Franco-British exposition held in this city during 1908, induced a wide-world interest in Canada, and unquestionably maintained a foremost position amongst the world's exhibitors, it is apparent that the full beneficial results of that exhibition cannot be counted observable in the first or second years, indeed one cannot say where the effect of that magnificent display will end.

The special efforts required of our agents during the past fiscal year in order to secure suitable and deter unsuitable emigrants from going to Canada, have been successful and creditable. All the agents have transacted the business of the department during the past fiscal year with much business ability and great personal tact and energy. The correspondence received has had immediate and careful attention, and their extensive distribution of literature resulted frequently in their being short of this material. I would respectfully urge that literature of an inexpensive kind in very large quantities be supplied for the purposes of work on this side of the Atlantic.

The inspection of out-going emigrant steamers from London, Liverpool and Glasgow has been continued by our respective agents at these ports, and a statement concerning each such steamer carrying emigrants has been forwarded to the department at Ottawa.

I have much pleasure in recording the cordial co-operation which this office has received from the Imperial Government Emigrants' Information office, and the Board of Trade office. The latter department controls the issuing of licenses to booking agents, and it is a special duty to see that no booking agent takes advantage of any intending emigrant. I am pleased to report that our system of inspection is such that seldom, if ever, is it necessary to discipline or criticise booking agents in this respect. The transportation companies are fully alive to the necessity of continuing this policy, and without hesitation have agreed to the suggestions made by this branch of the department.

In addition to the general supervision of all emigration work (except in France) on this side of the Atlantic, the staff in London have had special charge of the London agency district, consisting of fifteen counties, with an enormous population, and during the past year there have been distributed from this office (not including those sent to other agencies), by correspondence, over the counter, and through the steamship companies in the London district, nearly half a million pamphlets of various kinds.

Twenty thousand and forty-one persons visited the London office during the past fiscal year to make personal inquiry, and discuss proposed emigration, &c., and a reasonable estimate, based on actual count for several days, shows that nearly a million people stop to inspect our window display in Charing Cross.

During the year nearly 62,000 attachments have been made to the files in the London office alone.

All the provinces of the Dominion, with the exception of Manitoba, have furnished this office and our agencies with large quantities of up to date literature, specially informing the public regarding their respective provinces, and so great has been the demand through our correspondence for the literature that we are constantly requi-

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sitioning further supplies. It is gratifying to realize that the auxiliary efforts of the various provinces of the Dominion, made available through the extensive propaganda of this branch of the Department of the Interior, have reached a large number of people to whom otherwise the name of a province in Canada would have no significance.

The provinces of British Columbia, Ontario and Nova Scotia by their excellent special fruit and vegetable exhibits last year created an attention regarding these branches of agricultural work which must produce substantial and favourable results. With all the provincial governments and the agents thereof in the British isles the federal government agents maintain the most cordial co-operative relations.

The steamship and railway companies operating to and from Canada have through their officers earned the just appreciation of the department for their assistance in many ways in the work of the department, and I have continued to assure them that they may depend upon the hearty sympathy of the department in the work of transporting desirable passengers to the Dominion.

In view of the very large and successful emigration of children to Canada I have taken advantage of opportunities, when time permitted, of visiting industrial, training and other schools from which the children were selected, and in company with Mr. G. Bogue Smart, the inspector of British immigrant children and receiving homes, gathered a large amount of information which will the better enable this office to make careful selection before consenting to the emigration of such children. The reports of the special inspection of such children have been received with much gratification by public officials and others privately interested in this work in the British isles. Considering the great number of applications received by the department for such children from very desirable citizens of Canada, it is apparent that there is a large field for this class of emigration, and the satisfactory reports which have been received from the department, after inspection of these children in their foster homes in Canada, appeal to the British public with much credit to the department.

In connection with your lordship's multifarious duties, connected with the important office of High Commissioner for Canada, the personal, kind attention you have been able to give at all times to the emigration branch of the public service is at once an evidence to the department of your appreciation of the great value that branch of the government work is to the Dominion of Canada, and your determination not to spare yourself for Canada's sake. I beg to offer my personal thanks to your lordship for very special consideration at all times.

Your obedient servant,

J. OBED SMITH,
Assistant Superintendent of Emigration.

No. 2.

REPORT OF A. F. JURY.

OLD CASTLE BUILDINGS, PREESON'S ROW,

LIVERPOOL, April 1, 1909.

The Assistant Superintendent of Emigration,
11 and 12 Charing Cross, London, S.W.

SIR,—When all the circumstances are taken into consideration, I think the result of last year's work has been most satisfactory, and while the numbers have not been as large as in the two previous years, the quality is much improved, and their usefulness to Canada greater than in any previous year of my experience. The new departmental regulations have enabled us to exercise a stricter supervision of the charitable society class, who frequently are not well fitted for pioneer farm work.

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They have also dissipated the idea that prevailed to a certain extent in this country that Canada was so anxious to obtain population that she would receive the undesirables from the police courts and the slums. In most cases the man who is unable to make a living in this country will be unable to do so in Canada, but the man who has been able to make a living here and save enough to have twenty-five dollars, in addition to his inland railway fare to his destination in Canada, is most likely to be able to do much better there, and is not only a valuable addition, but a good advertisement for Canada. The extension of the period during which undesirables can be deported, which I understand is proposed, will, I think, act as a deterrent to people who want to get rid of their ne'er-do-wells by shipping them to Canada. This class of emigrants not only gives Canada a bad name when writing to this country, but their lazy, drunken, shiftless habits give Englishmen a bad name in Canada, and cause the impression to get abroad that they are not wanted there.

There are thousands of village clubs and reading rooms in this country that offer a good field for propaganda work if a suitable handbook of Canada was published and circulated among them. A revised edition could be issued every year to keep the statistics up to date. By this means we should reach the class most required in Canada at the lowest possible cost. This work could be followed up by the agents in this country sending all their old Canadian newspapers to the reading rooms that receive our handbook, which would have the effect of keeping the interest in Canada alive all the year round.

I must again emphasize the necessity for a good supply of Canadian agricultural products, with special reference to choice fruits and corn cobs in the husk and on the stalk, to be exhibited in the agency windows and at the various agricultural shows. There is nothing that tends so much to disabuse the public mind here with regard to the Canadian climate, as exhibiting products that cannot be grown out of doors in this country.

I would also again take the liberty of suggesting the issuing of a double crown coloured poster respecting farming in Canada, with a space left at the bottom for the local steamship agent's name and address. If this was done the local steamship agents would not only show them in their windows in the principal streets of the cities, towns and villages of the United Kingdom, but they would go to the expense of posting them throughout the British isles.

There has been little demand for lectures this season, and those I have delivered have been poorly attended.

The agricultural shows at which I have exhibited have been well attended and a large amount of literature has been distributed, but the supply of government pamphlets for this purpose has not been equal to the demand, and I have had to distribute a large amount of steamship literature, which is not as satisfactory as having our own.

The letters of inquiry as a result of our advertising have been disappointing, and I think the best method would be to use only the great papers that are noted for being the medium through which the most successful business men reach the public, these naturally being the papers that people read who are looking for opportunities to improve their condition.

The number of souls on whom bonus has been claimed during the past year, through this office, was 638.

The work of receiving and handling the deports has increased very largely during the past year.

Mr. Edwin MacLeod, my assistant, made a trip to Canada during the year and visited all the leading points. While he has always been efficient and useful, his trip has made him far more helpful in the work.

Your obedient servant,

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No. 3.

REPORT OF L. BURNETT.

16 PARLIAMENT STREET,

YORK, March 31, 1909.

J. OBED SMITH, Esq.,

Assistant Superintendent of Emigration for Canada,
London.

SIR,—I have the honour to submit to you my annual report for the year ending March 31, 1909.

Emigration from this country to Canada has been somewhat checked during this year, owing to the depression in America affecting Canada, and reports that prevented many people from going who otherwise would have gone. I find that the greatest drawback to emigration from this country is the lack of funds by the parties who are willing to emigrate, and who would undoubtedly make good citizens for Canada, if once they were in the country where there is plenty of scope for their energies and so many golden opportunities for them to possess their own land and become independent in a few years by exercising good judgment and frugality. Another reason why the agriculturalists and domestic servants are not leaving this country for Canada in larger numbers is on account of the wages here being increased, so that there is very little difference between the wages in England and Canada at the present time for good servants of either sex. The agriculturists in this district make very suitable settlers for Canada, and very few of them fail to make a success of life there. This year I have had a great many young men visit this office who have only been in Canada a short time, and have come to England to spend the winter, and induce others to return with them. In one case a young man took back with him seven farm hands, and all purposed taking up land. The booking agents in my district have been a little discouraged at the numbers going to Canada, compared with two years ago, and to a great extent they attribute this to the restrictions imposed by the Canadian government, but the latest reports from them are encouraging, and they are looking forward to a brisk business this spring. I have visited the booking agents whenever I deemed it necessary, and endeavoured to co-operate with them in every possible way to secure the right class of emigrants. This winter my district has been well covered by lectures and farmer delegates, but the booking agents have not been so enthusiastic in arranging for lectures, as owing to business being slack they did not care to go to too much expense.

The geography of Canada is being taught in all schools this year, and I have numerous applications every day from school teachers and scholars for copies of our Canadian atlas. I comply with their requests as far as possible, thereby getting the parents interested, which may ultimately result in their making their homes in the 'Land of Promise.'

Your obedient servant,

L. BURNETT.

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No. 4.

REPORT OF G. H. MITCHELL.

139 CORPORATION STREET,

BIRMINGHAM, March 31, 1909.

J. OBED SMITH, Esq.,
Assistant Superintendent of Emigration,
London.

SIR,—I beg to submit my report for the year ending to-day.

During 1908 there was a very heavy decrease in the number leaving for Canada owing to the very alarmist reports which reached this country of the state of the labour market in the Dominion; that the depression was caused by non-Canadian influences which affected the rest of the world was of course immaterial to the man seeking work, but the accounts received such extraordinary publicity that the effects will take a considerable time to disappear. The department's restrictive regulations had a tendency to confirm the impression that no more emigrants were wanted, the general public failing to make the discrimination that was necessary accurately to understand the position. However, the regulations ensured that of those who did sail a greater proportion than ever before was desirable from a Canadian standpoint. This spring a much better feeling prevails and I anticipate that the year will show greater returns than 1908 although still much below the figures of 1907. Competition has become keener on the part of the Australian colonies and New Zealand, and they are securing an increasing number of emigrants of the kind most wanted in Canada; their literature is very attractive in appearance as well as in other ways, their exhibitions of produce are particularly well done, and their commissions to booking-agents equal to our own. It will be necessary to continue to use every effort to keep Canada to the front.

The newspaper press in my district as a whole has not been unfriendly; some of the papers at times insert unfavourable letters from men who have returned and from dissatisfied settlers but they show a willingness also to give the other side of the case.

My time has been fully occupied in the usual way, answering correspondence, interviewing personal enquirers, visiting booking agents, attending agricultural shows with exhibits, arranging itineraries for delegates, and for the motor and horse wagons, and giving and arranging lectures, the lantern slides being in constant use during the winter season.

A good start has been made in securing correspondents in the villages and some of these have already proved very useful.

The office daily record shows an increase in the number of communications received, 5,776 against 3,803, and letters sent out 6,604 compared with 4,207 last year, but the callers were fewer, 2,930 against 3,965.

Acting under instructions I paid a visit to the Dominion during August and September, and I was glad to have the opportunity of renewing my acquaintance with various places, of seeing the developments which had taken place since my last visit six years previously, and of going through districts which were not at that time opened up. It gave me a chance of looking up many men who had gone out on my recommendation; some of them were working on farms and others were now on farms of their own, and it was very gratifying to find them without exception doing well. Needless to say the trip enabled me to gather much fresh material which has already proved invaluable in my work.

Your obedient servant,

G. H. MITCHELL.

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No. 5.

REPORT OF H. M. MURRAY.

EXETER, March 31, 1909.

The Assistant Superintendent of Emigration,
London.

SIR,—I have the honour to present my annual report for the year ending March 31, 1909.

Like other districts there was a distinct falling off in emigration to Canada during the year just closed. I, however, do not consider this as being a drawback but rather a help, as it has enabled the general public in this country to understand that Canada will no longer admit into the Dominion the undesirable, unwilling to work, and shiftless men from Great Britain, but rather have the numbers reduced and receive emigrants of a higher standard both morally and physically. Bearing this in mind as being the desire of the minister and the department, I have during my periodical visits to booking agents endeavoured to impress upon these gentlemen that we are only desirous of securing men and women of the best class, and of the former only those willing to go on the land, and the latter for domestic service, of course keeping before them the fact that there are many openings in western Canada for men and women with capital and grit. I am pleased to say that my efforts directed on this point have been highly successful, many fine specimens of the typical agriculturist having gone out from the west of England.

I think shipping agents now thoroughly understand the class of men required in Canada. They are not so prone, as was the case with many of them some years ago, to accept any one as a passenger to Canada, caring little or nothing as to his future or progress so long as a commission was received on the booking. The certain amount of control the bonus arrangement gives to government officers over these agents has in my opinion had a very salutary and steadying effect.

The counties of Somerset, Devon and Gloucester have this year, as during 1907, given the best results. In this connection I may say that on one steamer alone, which sailed on the 12th inst., there were over 150 good sturdy farmers and farm servants, secured between Plymouth and Bristol, many of them, especially from Somerset, having capital at their command and intending to settle in southern Alberta. These men will be an acquisition to Canada. The returns from Gloucester do not give a fair estimate, as the Canadian Pacific Railway Company, who have a branch office in Bristol and to whom no bonuses are paid, booked over 800 passengers, of whom many belonged to the bonus classes.

In the county of Wiltshire we have a decided increase in the farming class of bookings, and a decrease of 25 per cent in Hereford. In the latter county there is a considerable acreage taken up with apple, pear and plum orchards. It is also to a considerable extent a dairying and cattle raising centre. Farmers are, as a rule, pretty well off and labourers are paid fair wages. We did well here a couple of years ago and I am confident good returns will come again.

Dorset is purely a pastoral and dairying county, and we have never been able to secure large numbers there, although I am aware that several from Dorset book their passages at Bournemouth, in the neighbouring county of Hampshire.

In Cornwall there are a sturdy set of men engaged in the slate and tin mines. A few years ago many of these mines were closed, owing to want of demand for the output. Now, however, it is the opposite. Many mines which have been closed for years are working full time and workers are scarce.

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South Wales has been fairly good, but as you are aware coal is the principal product, the country from Swansea to Newport, Mon., being honeycombed with mines, Swansea itself up to Llanelly in Carmarthen being occupied in the manufacture of tinplate. On the whole in this part of the country at least 90 per cent of the people derive their living in some way or other from the industries mentioned. Of course a great many of these people, especially the miners, have in early years worked on the land, but owing to higher wages drifted to the mines. In times of depression quite a number have gone to Canada for farming purposes, but recently high wages at home have been received, preventing emigration, although quite a number still go out to the mines in Pennsylvania, U.S.A.

The general work in this office has been carried out in the usual manner. Every attention has been given to callers and correspondents. During the year 3,281 persons called for information; 7,563 letters were received, and 8,651 sent out. Pamphlets are sent out with every letter as also an inquiry form, asking the addresses of friends who may be interested in Canada, to whom also pamphlets are sent.

The following agricultural shows were attended :—

Somerset county, Devon county, Bath and West, Gloucester county, Hereford and Worcester and Wiltshire. As a rule favourable weather prevailed and large quantities of literature were given away; on the whole I should say not less than 80,000 pamphlets. At these shows we come into direct contact with the special class we are after, viz., the agriculturists, and I am certain that by means of these meetings, where people come around the stand, examine our samples and get direct information, many are induced to make their homes in Canada.

The removal of our office from Cardiff, Wales, to the centre of the west of England has resulted in nothing but good. With a couple of capital show windows, exhibits of grain, grasses, fruit and minerals, helped by attractive pictures and transparencies of Canadian scenery, we have, especially on market days, a continuous crowd around.

Mr. Aylesworth gave several lectures in my district, as did also one or two gentlemen from British Columbia, the halls as a rule being crowded.

Farmer delegates were also with me, going around to the booking agents, seeing inquirers, &c.

Our sets of lantern slides have been loaned out for about sixty lectures by clergymen, school teachers and others, and as these lectures are nearly all given in young men's institutes, or such like meeting places in the country districts much good should result.

Fully 10,000 copies of the Canadian atlas have been so far given away, as also some thousands of wall maps. When these publications were announced applications came pouring in, and I received as many as 540 in one day. The school children and teachers seem to appreciate them, and either they or the teachers write that they are now for the first time taking Canada as part of their scholastic course. This is satisfactory. I was glad to have the privilege in July last of paying another visit to the Dominion. I travelled from Quebec to the coast through all the western provinces and the fruit-growing districts of British Columbia. On my return journey I was able to see the splendid harvest of western Canada gathered in. I visited farmers in every district, being driven over the country by government immigration agents. Much information of a practical nature was gained which since my return I find most helpful in my work. While in Canada I met quite a number of successful farmers from my district who blessed the day they went to Canada.

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ACREAGE and Population of Counties in my District.

Counties.	Acreage.	Population.
<i>South Wales—</i>		
Brecon.....	473,087	53,951
Carmarthen.....	464,587	123,570
Glamorgan.....	576,537	866,250
Pembroke.....	357,118	82,424
<i>West of England—</i>		
Cornwall.....	886,384	318,591
Devon.....	1,633,269	664,697
Dorset.....	624,341	199,968
Hereford.....	539,226	112,549
Monmouth.....	395,849	316,864
Somerset.....	1,070,078	466,193
Wilts.....	809,220	263,944
Gloucester.....	712,757	648,627
	8,542,453	4,117,628

Your obedient servant,

H. M. MURRAY.

No. 6.

REPORT OF JOHN McLENNAN.

ABERDEEN, March 31, 1909.

J. OBED SMITH, Esq.,

Assistant Superintendent of Emigration,
London.

SIR,—I beg to submit the following report of the work of this agency during the year ending March 31.

The year opened in the midst of the great commercial and industrial depression which has prevailed everywhere for the past eighteen months. This stringency had the effect of largely stopping the movement from this district; even the classes for which we had openings were sceptical, and it was difficult to convince them that there was any work to be had, in view of the many conflicting reports and the requirements of the department. It made it often disagreeable for myself and other government representatives on account of the wide publicity given by newspapers to these reports, and no matter how strenuously we might deny the statements, the public were disposed to accept the press news in preference to our denials.

I am glad to report, however, notwithstanding the difficulties, that a large number of desirable farmers and farm servants left the north part of Scotland during the past year for Canada. Since the gathering of harvest, when it became an assured fact that the country would have a bountiful supply of money and that there would be extensive building of railroads and other public works during 1909, I have used every effort to revive the interest in my district.

During the past four months I have delivered 28 lectures, illustrated with lime-light and cinematographic views, and addressed over 15,000 people, many of these lectures having been given in purely agricultural districts, while all of them have been attended by a large number from the country. Besides directing attention to

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the great possibilities of Canada, I have been enabled by those lectures to partly neutralize the growing opposition among many people here to our propaganda. I tried to impress upon the audiences that our aim is not to depopulate Scotland, but to divert the stream of emigration from the centres from which it has been flowing for the past forty years, to our own shores.

I am glad to report that I have been enabled to secure the hearty commendation of the leading men in all the large centres by these lectures.

The outlook for the present year is exceedingly promising, and I look for a large increase over that of last year. I am hopeful that the number of agricultural labourers and farmers from my district will even exceed the number of the banner year 1907. While we have opposition from some of the leading farmers, on account of the heavy drain made upon agricultural labourers, the feeling on the whole is very well disposed towards Canada, as nearly every family in my district is interested through relatives or friends.

Your obedient servant,

JOHN McLENNAN.

No. 7.

REPORT OF M. McINTYRE.

35 AND 37 ST. ENOCH SQUARE,

GLASGOW, March 30, 1909.

J. OBED SMITH, Esq.,
11-12 Charing Cross,
London.

SIR,—I beg to report that during the greater part of the year, the depression of last season still being felt, Scotch emigrants' attention turned quite largely to other fields than Canada. The monetary regulation has kept some back, but this is cutting two ways; while it has kept out some who would make good settlers, it has also kept out a good number of an undesirable class. I am pleased, however, to report that during the last few months prospects seem much brighter, and there is a splendid class going.

The trip to Canada during the year, of the Scotch Agricultural Commission has been helpful to emigration, as most of the members have been giving lectures on Canada as seen by themselves. To aid these men in their lectures, I have lent them lime-light views with which to illustrate their remarks regarding the different localities.

The visit of the Canadian curlers during this winter was very opportune, as Canada was being brought largely before the people, and this, followed by lectures, and the visits of Canadian farmer delegates to Scotland, along with the usual efforts from this office, has given a stimulus to emigration, and the tone of things is considerably improved.

The policy of supplying atlases and wall maps of Canada to schools, is one which should bear fruit in the future. The schooling of the young is the best way to provide for emigration in the coming years, and through the children, knowledge of Canada reaches many homes that otherwise would be missed.

Distributing literature from a wagon is a splendid means of getting in touch with the agricultural classes, but the best kind of wagon is a light one that can depart from the main roads, getting into the less frequented parts.

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With a view to keeping Canada and her advantages before the public, I have attended agricultural shows and exhibitions, having exhibits at same, distributing literature from these stands, and giving information to all inquirers. I have given lectures in different localities, have also rendered assistance to all those I knew intended giving lectures on Canada, and have found it beneficial to work in conjunction with the clergy, as I find a great number of them are favourable to Canadian emigration. In fact, I have used all means so far as my ability goes, to further the object of this office.

Your obedient servant,

M. MCINTYRE,
Canadian Government Agent.

No. 8.

REPORT OF E. O'KELLY.

CANADIAN GOVERNMENT OFFICES,
44 DAWSON STREET, DUBLIN, March 31, 1909.

The Assistant Superintendent of Emigration,
11-12 Charing Cross, London.

SIR,—I beg to present my twelfth annual report, covering the period from March 31, 1908, to March 31, 1909.

The work of my office has increased satisfactorily since the Dublin office was reopened in September, 1907.

Number of letters received.. . . .	2,557
Number of letters sent out.. . . .	3,895
Number of callers.. . . .	2,491

In addition to attending at a number of the most important show fairs, with my stand of exhibits and literature, I have also attended a number of stock fairs, had literature distributed amongst the farmers with whom I spent a considerable portion of the day comparing farming on rented and highly taxed land in Ireland, and farming on free and lightly taxed lands in Canada. The advantage Canada offers to farmers in the much smaller amount of capital required to stock land there than in Ireland, next to being able to acquire free farms, appears to impress Irish farmers most and I am sure will prove a great inducement to many of them to emigrate. In very few instances have I had a pamphlet left at the end of a fair day and my supply, a fairly liberal one, has often not been equal to the demand.

I have supplied schools and reading rooms with the wall map, atlas, and larger pamphlets, where those institutions are not dominated by the Nationalist party, who are now more anxious than ever to keep people in this country.

In the past twelve months I have inspected 157 booking agencies and forwarded my reports on them to you. I found the agents as a rule intelligent men, but most of them careless and indifferent to the booking branch of their business, and notably to advertising Canadian emigration in any shape. In this connection I may mention that while the American lines are largely advertised at most of the railway stations, in the provinces of Leinster and Munster, and the Australian and New Zealand lines in many stations, the Canadian lines are totally unrepresented, a grave lack of enterprise to my mind, and a circumstance I have brought to the Canadian steamship companies' notice, but so far without result.

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The country people, who are always ahead of their trains when travelling to fairs and markets, if we believe in advertising, must be influenced by the splendid posters of the American lines, which they see at every station. The agents show more interest in their work, and more care in their correspondence since I commenced my visits of supervision and encouragement to them. The class of emigrant leaving Ireland for Canada is still improving, but the number this year falls far short of the season of 1907-8, in fact the total emigration from Ireland has not been so low for fifty years. This decline is mostly the result of the state of unrest and excitement caused by the continuous change in the land laws, aided by the depression in Canada and the United States, but these causes will pass away, and the people will continue to leave the country as before. In the poor districts the landing money required has also proved an obstacle to emigration. With reference to the landlord class there can be no second opinion, but that they will leave Ireland in large numbers, for the oversea states of the empire, when they get paid the price of their properties by the government. They will all be possessed of capital varying in amounts from hundreds of pounds to thousands, and will prove a valuable addition to the population of the country they select to settle in. The callers at my office are largely composed of this class.

I have had no complaints from Irish importers of Canadian apples in the past year, and those I have conversed with appear quite satisfied with their purchases.

Your obedient servant,

EDWARD O'KELLY,

Canadian Government Agent.

No. 9.

REPORT OF JOHN WEBSTER.

CANADIAN GOVERNMENT OFFICES,

17-19 VICTORIA STREET, BELFAST, March 31, 1909.

J. OBED SMITH, Esq.,

Assistant Superintendent of Emigration,

11-12 Charing Cross, London.

SIR,—I beg to submit my report for the year ending March 31, 1909. My work during the summer season was divided between official duties—visiting steamship agents—and making exhibition of Canadian products at various agricultural shows. During the year I have placed 246 school maps and 3,577 copies of the school atlas. The total number of pamphlets distributed through the office, and in conjunction with the exhibit wagon, amounts to 36,215 for the year. The number of letters received was 2,656; outgoing letters, 4,329; callers at office, 8,686. Extensive alterations in the office have been carried out under my supervision, the landlord being responsible for a share of the cost; the office now presents a good appearance and is in every way satisfactory. I have called on nearly every agent of importance in my district, and with these have discussed matters of mutual interest. I have generally found them willing and anxious to carry out any useful suggestions I make to them. It would be a wise policy on the part of one or more of the steamship companies to revise the list of their agents; they could with advantage weed out many who are making no effort, and who take no interest in their work. Sometimes in a small town you will find two or three agents for same line, where one good man would do the work much better.

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I made exhibition at six important fixtures, as follows:—

- Belfast spring show, 20th, 21st, 22nd May.
- Ballymena summer show, 3rd June.
- Portadown summer show, 10th and 11th June.
- Armagh summer show, 24th and 25th June.
- Omagh summer show, 15th and 16th July.
- Belfast summer show, 23rd and 24th July.

At the first of above I made use of the elaborate 20-ft. stand supplied by the department, and had a most attractive display. At the five subsequent shows I found it necessary to use a smaller stand, as the large one would not fit into the tent space provided. It would be an advantage to me if the large stand were say, five feet shorter. At all the shows I was ably assisted by our Mr. John Mullan. Inquiries were numerous, and a large amount of literature was distributed; naturally at an agricultural show we meet the most desirable class. For exhibition purposes, I am frequently handicapped owing to the lack of good material; this year the supply of stuffed wild fowl received, was most acceptable, and made an attractive display. It would be very helpful if, at short intervals, a small consignment of selected fruits were sent over, this would be useful for the shows and afterwards serve for display in the windows of the office. Some set up fish and small animals would come in for the same purpose.

On May 5, Mr. George Robinson started out on his itinerary with team of horses and democrat wagon exhibit, he was out almost continuously until November 14, a period of over six months. The counties visited were Armagh, Antrim, Down, Derry, Donegal, Cavan, Monaghan, Fermanagh, Leitrim, Longford, Louth, Westmeath and Meath. We endeavoured to arrange that his visit to a town or village should be timed with the market or fair taking place that day. He was therefore continually meeting throngs of agricultural people and had a fine opportunity for distribution of literature with which I kept him supplied. The wagon accomplishes a most useful purpose.

During the winter I fulfilled four lecturing engagements, and have others still in view. Acting on your authority I have recently purchased a full lecturing outfit, including lantern and stand, portable screen, and acetylene generator; I am very glad to have these as I am now in a position to accept invitations from anywhere, including, which is important, outlying rural districts.

I am glad to again report that the calling of Canadian Pacific steamers at Belfast, has, for the company, proved a decided success and a venture which they should have no reason to regret, as each ship secures a fair number of passengers. By the last sailing, on March 18, the ss. *Lake Champlain* took 107 emigrants for Canada. The fine boats of the Allan line from Liverpool and Glasgow, calling at Derry, are also getting a fair share of the business.

I was pleased, this spring, to have the services of Delegate Mr. John Kennedy from Edmonton, Alta. He is one of the best delegates ever placed under my direction, a north of Ireland man himself, having many friends and relatives here, and this being his third trip to Ireland as delegate, he is a well known and popular man amongst the farmers. While with me, I had a wide itinerary arranged for him. I trust his visit may prove useful.

My relations with the local press are cordial; I therefore experience no great difficulty in having interesting Canadian items, including copy of weekly bulletin received by the High Commissioner from the Minister of the Interior, appear in the leading papers. Naturally in a country like Ireland with a declining population, an emigration propaganda is not popular, but in the north the sentiment prevails, 'If they must go, let Canada be the selection.'

Your obedient servant,

JOHN WEBSTER,
Canadian Government Agent.

No. 10.

REPORT OF D. TREAU DE CŒLL

23 PLACE DE LA GARE, ANTWERP, March 31, 1909.

J. OBED SMITH, Esq.,

Assistant Superintendent of Emigration,
London.

SIR,—I have the honour to submit my report for the year ending March 31, 1909.

The emigration from Belgium and Holland has not been so heavy this year as previously but it is pleasing to state that those who left for Canada belonged in every sense of the word to a better class of emigrants than ever before. This proves clearly that the importance of our country is beginning to be known more favourably every day, and that the Belgian people have confidence in its future. It is but just to remark that this is greatly due to the interest the primary or common school teachers in Belgium have taken in Canada, to the free distribution of our propaganda literature and the teaching of our geography, and to the numerous lectures delivered. The introduction of our propaganda literature in the schools commenced in 1905, immediately after the World's Expansion Congress at Mons, where the committee on education decided that it became absolutely necessary for Belgians to have a knowledge of the new countries, in order that they might be prepared to make a judicious choice if they should decide to emigrate, whether it be to seek their fortune as merchant, manufacturer or farmer.

This view was unanimously accepted and steps were taken to make the study of the different countries part of the educational course. I seized the opportunity which presented itself and immediately offered our atlases to a certain number of the teachers. Canada was the only country which at that time could boast of an up-to-date propaganda literature and the demands for it have increased yearly, from 22 in 1905 to over 3,200 schools now using the geography of Canada. Amongst these a good many are winter schools in farmers' communities, where young men from 16 to over 20 receive general instruction, together with lessons on agriculture, gardening, &c.

A few of these scholars left last year and others will leave shortly, and I am confident that they will make the best of colonists and will cause quite a number of their friends and relatives to follow them.

The month of March, being the first one favourable for emigration, promises a very good season. Many have already left and will be followed weekly by others, a certain number taking their families, while farmers and farmers' sons are going, to have everything in readiness to receive at the earliest possible time the rest of the family.

I consider that 25 per cent has been added since January to the number of emigrants of the nine previous months.

The Dutch emigration will also be much better than last year. Already a few families have sailed who had the proper means for settling and as they are generally good workers and sober men, I am quite sure that they will be a credit to their new country.

I have given fourteen lectures on Canada this winter, and besides this, no less than twenty have been given by teachers and private individuals, who either had visited Canada, had lived there or had made it a point to study it. As far as possible I have provided everything necessary for these lectures by giving special information and also sending views.

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I acknowledge with pleasure that the assistance I received from the teaching staff greatly facilitated my work. The reappearance of the monthly paper *West Canada*, which contains the most interesting up to date information concerning crops and values thereof, letters from Belgians and Dutchmen, the regulations and laws on emigration and Dominion land, have also been greatly appreciated and although it causes a surplus of work in one way, it facilitates it in another, the most important information being available to a great number of correspondents by this publication.

No special advertising having been done this year, the correspondence has been normal. The number of letters received during the year was 4,090, of which 3,015 called for an answer. I had interviews with 910 persons who visited the office for verbal information on Canada. Any others with whom I was corresponding, I always considered it my duty to meet before their emigration was completely decided, so that I might judge if they really were desirable emigrants, also to prevent long and tedious answers to inquiries. In order to attain this point the more easily I designed as place of meeting the town or city most centrally situated where I could meet a certain number of interested parties.

As the office work allowed me I visited the agricultural fairs in summer and fall to have propaganda literature distributed.

Your obedient servant,

D. TREAU DE OELL,
Canadian Government Agent.

No. 11.

REPORT OF PAUL WIALARD.

PARIS, April 1, 1909.

The Superintendent of Immigration,
Ottawa.

SIR,—I have the honour to submit my report for the year ending the 31st ultimo.

Until last year, though the Canadian government did not encourage any but the agricultural class to emigrate, many other persons could set out with some degree of certainty of finding work immediately at remunerative wages. But now, with the marked decrease in construction work, and the invasion of our country by a considerable crowd of workmen of different trades driven from the United States by the industrial conditions in that country, Canada finds itself under the necessity of applying greater restrictions to those, other than agriculturists and domestic servants, presenting themselves as immigrants, and this, naturally, has caused a reduction in the volume of emigration from France to Canada.

Nevertheless, although in all the agencies there has been a very noticeable decrease in the number of departures, nearly 50 per cent in some cases, I believe that we have been very fortunate to keep up to figures which are not far from those of last year; the statistics tell us in what proportion.

Our work has not diminished, but the contrary. Canada is known better and better in France, and owing to the commercial convention between the two countries we have had still more requests for information than last year. Our correspondence has been about 12,000 letters, which shows the great favour Canada now enjoys here. If conditions continue to improve, of which there seems no doubt, this season will see a great number of settlers set out who are desirous of taking their share in the advantages offered by our country.

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I gave, and had Messrs. Geoffrion and Montpetit give, many lectures on Canada, economical, geographical and historic, setting forth all points of a nature to demonstrate well the prosperity of Canada in all its relations. Besides that we have distributed a large quantity of pamphlets which have contributed to spread the Canadian idea in the public mind, and to cause to spring up seeds which sooner or later will produce excellent fruits.

In this respect I was able recently to make an arrangement with the National Bureau of Popular Lectures, subsidized by the French government, and which counts among its subscribers ten thousand teachers and officers of the French army, to publish a lecture with photographic illustrations of Canada. I hope that this lecture will be given by a great number of these subscribers or by all, since on the one hand Canada is a subject of actuality on account of the recent commercial treaty, and since on the other hand all the subscribers to this publication belong to it only for the purpose of receiving each month a lecture all ready for delivery to their regular audiences, pupils or soldiers. I must add that no advertising appears to me so well calculated to show what our country now is and what it will be in the future.

I was authorized to go to Canada last summer to take personal account of the progress constantly realized in all parts of our country. I saw that the French settlers, spirited, energetic and knowing how to adapt themselves to the methods of work in the country, have succeeded quite perfectly, whether they settled in the province of Quebec or in the other provinces.

Your obedient servant,

PAUL WIALARD.

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OPERATIONS IN THE UNITED STATES.

No. 1.

REPORT OF W. J. WHITE, INSPECTOR OF AGENCIES AND PRESS
AGENT.

OTTAWA, April 2, 1909.

The Superintendent of Immigration,
Ottawa.

SIR,—The statistical portion of your report shows that the number moving across the boundary to Canada during the past fiscal year for the purpose of becoming settlers in this country fell a trifle short of sixty thousand, but it is so near this figure that there is reason to congratulate the agents who have had charge of the work of soliciting and securing so many and such a splendid class of settlers.

You also show in classified order the number who have entered upon homesteads. The aggregate wealth of these settlers is also given. There is no necessity for repetition.

Your attention is, however, directed to the fact that the number who have accepted the privilege of homesteading does not afford a fair basis of computation of the number that has moved across the border. The allurements of a free grant of 160 acres of land—such land as central Canada possesses—with the added opportunity to select an additional 160 acres, within a certain area, is tempting to a great many. But during the past year many more have preferred to purchase lands more contiguous to existing and projected lines of railway; the homesteader now has to make his selection some distance away, and many have gone back sixty and seventy and even a hundred miles. The land they get is fully as good and, with increasing settlement around them, it will not be long before they have a railway.

It is not alone to the personal stamp of the 59,832 new arrivals from the United States that your attention is directed, but, besides being men of splendid character, physically strong and of an integrity that comes from close connection with the uplifting surroundings of farm life, these people crossed the line bringing with them at a reasonable estimate, in stock, cash and effects, upwards of \$60,000,000. Not only this, but what is worth fully as much, they took with them the experience that years of life on the prairie of the middle west of the United States gave. This experience had taught them methods of farming that were readily adaptable to the central Canada farm; it was an experience that was not useful to them alone, but one that was made profitable by the settler from other lands, who did not bring with him the advantages that the experience of the settler from the United States gave; he was valuable as a settler not only for himself but the use he was to others less experienced. Conditions in his new life were so little different from the one he had left that no time was lost in adapting himself. He found that the manner of working the soil was similar, methods of cultivation the same, the principles of the laws were alike and it was as if he but moved from one part of his own country to another. As a rule he arranged his affairs so as to arrive at his new home just at the right time, so as to secure a crop the same year—probably a crop of flax—erect his house, send for his family and then count the months that would elapse before he could become a Canadian citizen. It is not only on the farm that the class of settler, of which this report speaks, becomes a strong factor in building up central Canada and Canada as a whole. The farmer from

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—county, Minnesota, is followed by the merchant and the tradesman with whom he has done business since he first came to the country from Ohio. Then the manufacturer, anxious to retain the trade of the people he has known for years, follows. Thus are these settlers helping to build up the towns and cities of central Canada, becoming part of the life that causes the hamlet to grow into the town, and so on. Pork-packing industries are now headed by American money; brick and tile plants are managed by men who have brought with them from Ohio, Nebraska and Indiana, the cash and the experience so necessary in establishing any enterprise. Mills of all kinds are erected and made to become paying institutions by the same forces.

The opening up of central Canada as a farming proposition seems to have come at the psychic period. With the rapid growth of the population of the United States and such a great percentage of it filling the cities, the time was certain to come when the energies of the farmer would become severely taxed to raise sufficient food-stuffs to provide for the millions that were dependent upon them. Lands that had in earlier years been prolific in their yield of wheat, oats and barley, had become drained of the elements that supplied the generating properties, and gradually, year by year, averages were growing less, and these fields were given over to corn and coarse grains. It was evident that some other source of supply would have to be discovered. True there was the height of land east of the Rockies. There, there was plenty of land, but while the soil might be of good quality, the indifferent climatic conditions made it impossible to grow grains without resort to the expensive methods of irrigation. Then central Canada was presented. The middle state farmer knew how to cultivate such soil, and he was anxious to repeat his earlier experiences on his old home farm when he raised large crops of wheat. When he examined he found Canada offered more than he expected. It offered broader acres, more tillable areas, long, level stretches of rich prairie land with subsoils the most suitable for the purposes to which he wished to put them. He could get more land of as good quality as he had ever worked, for lower figures. He could use his machinery to better advantage, and the man with the steam plough came forward and demonstrated what work could be done, and the steam plough is to-day one of the great factors satisfactorily introduced to the Canadian prairie by the American farmer. In every province they are now being worked. Splendid results in good yields of grain followed; the nutritious grasses gave the fodder that fattened his cattle without feeding any grain, the climate was what he had been led to believe, and in a short time his friends were advised that what the Canadian government agents had told him was true and that the literature that they distributed contained nothing of an exaggerated character. Conditions, such as I have set out, were healthful conditions, and were of prime assistance to the agent in his work during the past, as in previous years.

It has been the ambition of the United States branch of the service to make the year just closed the most successful of any, and while hoping that the showing has been satisfactory to the department, I wish to express to you, on behalf of the agents, their appreciation of the consideration that has been given by the department to such matters as were helpful to them in their campaign.

In past annual reports I have outlined as far as was practicable the methods that have been adopted in carrying on the work in the United States. These consist of making use of every means of publicity that is possible, with the dignity that should surround a work carried on under government auspices. Use has been made of the public press that reached desired communities; a series of four journals, in the smaller country weeklies, and in the county-town papers. These were run alternately during about six months of the year, beginning with November and closing with June. The replies to the advertisements were carefully answered, and literature mailed. In addition to this the work of the agent consists in visiting the different communities where interest in Canada is shown, holding meetings and in other ways giving the information generally desired by the prospective settler. During the fall, exhibits carefully

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prepared by the branch at Winnipeg have been put in place at different fairs throughout the states, and the results of this class of advertising are quite far-reaching. In some of the schools throughout the country we have been permitted to place exhibits of grain in the straw and specimens of the different wild and cultivated grasses. But these are only a few of the various methods adopted to bring Canada to the attention of the United States public. During the past year the National Editorial Association of the United States made a tour through the prairie provinces visiting some of the most important agricultural and commercial centres. The party comprised newspaper men from every state of the Union, and the resultant 'write-ups' were very interesting and valuable. Other interests in rivalry with ours have carried on a vigorous campaign to secure settlers for the lands in which they are interested, and this too in the districts and amongst the people our agents hoped to secure. It is safe to say that the figures of 59,832 for the past fiscal year would have been considerably increased but for this fact. During the past year the movement to Texas has fallen off, and we now find that the attention of the land agent is directed elsewhere. In the western and Pacific coast states, in the Dakotas, Montana, Washington, Idaho, Arizona, New Mexico, Nebraska, Minnesota and Wisconsin, scarcely a month passes but the announcement is made throughout the press that large areas of lands have been thrown open for settlement. These comprise Indian reservations, lands that were formerly fitted only for grazing, but with irrigation plants at various points are now made possibly valuable, and tracts that have been held by railways. The United States government has spent within the past few years millions of dollars in ditches, reservoirs, and whatever else was needed in the reclamation of lands once considered barren. Since the Canadian west opened up the splendid inducements its lands offer, the United States government has been very active in its efforts to open up lands, and hence the big irrigation projects, &c.

For every big irrigation project the government reclamation service has appointed a manager. The manager is an expert irrigationist and knows all the ins and outs of this kind of cultivation. Before he can have the job he must have learned all this by careful training and hard experience.

It is the business of the manager to guard against the failure of any settler in his district. He is there to tell the newly arrived settler what machinery to buy, how to build his laterals, how much water to let on to his land, how to plough and cultivate his soil and what he should plant. Considerable money is required to undertake this class of farming, however, and only the man of means can take advantage of it. There are also so many conditions surrounding the purchase that careful thought has to be given before entering upon it. One project is on the lower Yellowstone, which embraces an area of 67,000 acres. At the time of writing 700,000 acres of government land, located in three Indian reservations, are about to be thrown open for settlement. The greatest portion of this land is located on the Flathead reservation, just north of the Northern Pacific Railway tracks and west of the main range of the Rocky mountains, in northwestern Montana, where about 450,000 acres will be allotted to settlers. Another tract of 150,000 acres has been thrown open in Shoshone Indian reservation in Wyoming. It is said, too, that large tracts are to be opened up in Arizona, which will be sold at \$1 an acre, with settlement conditions.

In Mexico plans are now under way for opening up 1,000,000 acres of land, and it is said that some of the irrigation canals used in this will be so large that it will be possible to use them for transportation purposes.

The United States Reclamation Service announces the completion on May 1, 1909, of the Pathfinder dam, which has been built on the North Platte river, Wyoming. It consists of a vertical concrete-rubble arch, 215 feet in height, which closes the river where it flows through a narrow gorge. The length of the dam on its crest is only 500 feet, yet the storage capacity is 1,025,000 acre-feet or 358,000,000,000 gallons. Its great capacity is shown by comparison with the largest reservoirs in the east, of which

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the Wachusett dam has a capacity of 192,000 acre-feet, the Croton dam of 92,000 acre-feet and the Ashokan dam now under construction of 369,000 acre-feet.

It will be seen from these facts that there is still a large quantity of vacant land in certain of the states, and that no time is being lost, and no effort spared to bring these lands into service.

But there will still be enough people for all, for we find a great and a growing interest in farm life. The young man who left the farm years ago to take up city life does not find it as congenial as he hoped. Farm life to-day is free from many of the difficulties and drawbacks it then possessed, and the splendid returns that are now realized in the pursuit of agriculture are bringing back to that life those who once discarded it, and others are now giving the home on the farm earnest consideration. It is just a matter of decision now. Shall it be the land in the arid reclaimed west, that requires considerable money to operate it, a lot of hard work to keep the farm in condition, or a farm in central Canada, that requires but little hard work to secure splendid results and the opportunity to enjoy a climate that is unanimously considered to be healthy and otherwise desirable?

In the course of the work of the agents in the different states it is found that there are a great many former Canadians, and a large number of them devoted to agricultural pursuits. Special directions have been given from time to time that they be advised of the opportunities that Canada offers as a field for farming efforts, and it is a pleasure to report that great success has followed this line of the work. The reports of the department reveal more clearly than I shall attempt to show here how successful this has been. Amongst the French Canadians who are to be found both in the eastern, middle and western states, specially qualified men of their own extraction have had their labours well rewarded, and have induced large numbers to return to Canada. Some have gone to the farms of Quebec, while others have taken up homesteads and purchased lands in central Canada. What they have accomplished there is carefully watched and noted, and the reports sent back to their friends. This work is valuable and the results have been such that I strongly recommend its continuance.

In conclusion I may say that the correspondence at the various offices during the past winter months satisfies me that the 59,832 settlers from the United States during the past fiscal year will be increased to 70,000 in the next.

Your obedient servant,

W. J. WHITE.

No. 2.

REPORT OF DR. G. W. ELLIOTT.

746 ST. NICHOLAS AVE.,

NEW YORK CITY, N.Y., April 10, 1909.

The Superintendent of Immigration,
Ottawa.

SIR,—I have the honour to submit the following report for the fiscal year ending March 31, 1909, showing the number of aliens that arrived at this port destined to different parts in the Dominion of Canada, also number of aliens who were rejected for various causes :—

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Aliens Arriving.

	3rd Class.	2nd Class.
April, 1908.....	1,938	295
May, 1908.....	1,122	178
June, 1908.....	359	141
July, 1908.....	259	101
August, 1908.....	224	102
September, 1908.....	302	109
October, 1908.....	353	98
November, 1908.....	277	66
December, 1908.....	309	51
January, 1909.....	249	85
February, 1909.....	361	119
March, 1909.....	1,101	288
Total.....	6,854	1,633
Grand Total.....		8,487

Aliens Rejected.

Tuberculosis.....	3
Lupus.....	1
Trachoma.....	19
Favus.....	3
Insane.....	2
Imbecile.....	1
Syphilis.....	1
Psoriasis.....	1
Venereal disease.....	1
Organic heart disease.....	3
Cirrhosis of liver.....	1
Muscular atrophy.....	1
Hernia.....	2
Hysteria.....	1
Paralysis.....	1
Varicose veins.....	1
Pregnancy.....	1
Illegitimate children.....	4
Moral turpitude.....	5
Criminals.....	4
Deformities.....	1
Defective vision.....	3
Insufficient funds.....	60
Physically defective.....	1
Accompanying.....	10
Total.....	131

Your obedient servant,

GEO. W. ELLIOTT,
Canadian Government Official.

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OPERATIONS IN WESTERN CANADA.

REPORT OF THE COMMISSIONER OF IMMIGRATION.

DEPARTMENT OF THE INTERIOR,

WINNIPEG, MANITOBA, April 1, 1909.

The Superintendent of Immigration,
Ottawa.

SIR,—I beg leave to report that during the past year, as in former years, by means of the employment bureau in this office, ably aided by agents at the principal points of importance in Manitoba, Saskatchewan and Alberta, a thorough system of distributing and finding suitable employment for immigrants was successfully conducted; and, although the figures showing the number of those for whom employment was secured indicate a considerable decrease as compared with those of last year, unfilled applications for farm hands were on file at this office during the whole twelve months.

The number of applications received for farm hands was 4,667, of which 3,237 were filled. In addition to these, 328 applications were received for married couples, of which 185 were filled.

During the year large numbers of intending settlers from eastern Canada, the United States, the British isles and continental Europe called at this office in quest of information and advice in order to enable them to secure locations on which to settle; and I have much pleasure in reporting that so successfully and satisfactorily as the work of locating settlers been conducted that no complaints have been received of parties having been directed to undesirable locations. In this connection I would bring to your notice the valuable aid which the department has received, not only from agents of Dominion lands, immigration agents, sub-land agents and other officers of the department, but also from the secretaries of many boards of trade throughout the west and also from private individuals.

Homesteads well adapted for mixed farming can be secured in Manitoba, Saskatchewan and Alberta within reasonable distances of existing railways, and I would draw the attention of intending settlers to the Winnipeg and Dauphin districts in Manitoba, and especially that part of the latter which embraces the Swan River valley. There is still a number of homesteads to be secured in the Yorkton district, and I am informed by the land agent at Humboldt that there are large numbers of good homesteads in that district—both north and south of the Canadian Northern Railway—to which the attention of incoming settlers should be directed. With the exception of a number of homesteads in the western part of the Estevan district, the districts before mentioned are the most easterly which afford a large selection of homesteads to choose from. There are still 90,000 vacant homesteads in the Moosejaw, Battleford and Prince Albert districts in Saskatchewan, and 70,000 vacant homesteads in the Lethbridge, Calgary, Red Deer and Edmonton districts in Alberta. It will therefore be seen that, no matter what district in the three western provinces an intending settler decides to locate in, he will have no difficulty in securing suitable land.

English.—During the past year the immigrants from England were the best class that has ever come to the country; and I consider that this is due, in a great degree, to the restrictive measures which were adopted by the department in regulating the emigration work of charitable institutions in Great Britain.

Welsh.—It is to be regretted that only a comparatively small number of Welsh agricultural labourers came to this country during the year.

Scotch.—Scotch immigrants during the year were mostly of the agricultural class, and no difficulty was experienced in getting them farm work on their arrival.

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Irish.—The immigrants from Ireland were mostly of the agricultural class, and I have again to express my regret that a larger number of these people cannot be secured for Canada.

The number of immigrants from continental Europe shows a considerable falling off as compared with last year. Those who came belonged mostly to the agricultural class, and went on the land.

Settlers from the United States came into the country in large numbers during the year. About 95 per cent of them either entered for homesteads or purchased land. The others went to work on farms. In this connection it is gratifying to note also the immense volume of wealth in the shape of money, stock, machinery, implements and household effects which these people have brought into the country.

I take pleasure in drawing your attention to the fact that the requests made by immigrants for assistance in the shape of provisions, clothes and fuel show a marked decrease as compared with former years.

Immigration Accommodation, Winnipeg.

Thirty-eight thousand nine hundred and eighty-eight days accommodation was given to immigrants in Buildings Nos. 1 and 2 during the year.

Immigrant Hospital.

This building was closed on February 1 last, its services not being required for the present.

New Immigration Halls, &c.

During the year immigration halls were erected at Wainwright and Yonkers; temporary buildings at Mortlach, Herbert and Gull Lake, and premises were leased at Vegreville, Sedgwick and Irvine for the accommodation of incoming settlers.

Correspondence.

During the year there were sent from this office 2,492 registered and 29,095 unregistered letters. The number of letters received was 22,952.

Exhibits.

During the year 789 cases of agricultural exhibits were sent to the agents in the United States, Great Britain and British colonies, besides 297 samples of grain to public schools in the United States.

Deportations.

There were 257 undesirable immigrants deported during the year.

Annual Reports.

Annual Reports have been received from officers and agents stationed at Port Arthur and Fort Frances, Ontario; Emerson, Brandon, Teulon, Dauphin and Swan River, Manitoba; Regina, Yorkton, Humboldt, Prince Albert, Saskatoon, Battleford, North Portal, Maple Creek, Lloydminster, Duck Lake, Craik, Sinnett and Gravelburg, Saskatchewan; Edmonton, Calgary, Lethbridge, Medicine Hat, Strathcona, Red Deer and Sedgwick, Alberta, and New Westminster and Kingsgate, British Columbia. Many of these reports give information which is of much value in directing incoming settlers to desirable locations, and all give valuable statistical information.

I have again pleasure in saying that much of the success that has attended the work of this branch of the department is in no small measure due to the faithful and conscientious services of the officials in this office and at outside points.

Your obedient servant,

J. BRUCE WALKER.

Commissioner of Immigration.

JUVENILE IMMIGRATION.

REPORT OF G. BOGUE SMART, CHIEF INSPECTOR OF BRITISH IMMIGRANT CHILDREN AND RECEIVING HOMES.

DEPARTMENT OF THE INTERIOR,

OTTAWA, March 31, 1909.

The Superintendent of Immigration,
Ottawa.

SIR,—I have the honour to submit my tenth annual report as Chief Inspector of British Immigrant Children and Receiving and Distributing Homes.

A year of strenuous activity has been maintained and the work of this branch of the department has been conducted with due appreciation of the responsibility involved therein.

Statement showing progress of the work of inspection during the year 1908.

January....	103
February....	122
March....	187
April....	206
May....	174
June....	190
July....	208
August....	106
September....	160
October....	152
November....	142
December....	71

Total....	1,821
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Individual inspections of new arrivals before being placed in situations, not included in above statement..	192
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Grand Total....	2,013
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The probation in the 'Home' before leaving England is most valuable as, apart from the benefits accruing to the children, it enables the societies to weed out those who are not likely to 'make good' in Canada. The demand for juvenile immigrants in the country districts of Canada is well indicated by the following statement which shows the number of children emigrated to Canada during the fiscal year by some of the principal societies, and the number of applications received for children during the same period :—

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Society or Agency.	Children Emigrated.	Applications received for Children.
Dr. Barnardo's Homes, Toronto and Peterboro', Ontario, and Winnipeg, Manitoba	1,034	9,942
Miss Macpherson, Stratford.....	175	724
Mr. J. W. G. Fegan, Toronto.....	75	*500
Rev. Dr. A. E. Gregory, Hamilton.....	90	515
Rev. Robert Wallace, 'Marchmont Home,' Belleville.....	38	513
'Fairknowe' Home, (Mr. Quarrier's,) Brockville.....	173	723
The Misses Smyly, Hespeler.....	22	103
Mrs. Birt, Knowlton.....	142	770
The Catholic Emigration Association.....	308	638
Church of England Waifs' and Strays' Society, Sherbrooke.....	64	104
Church of England Waifs' and Strays' Society, Niagara-on-the-Lake.....	59	410
Bristol Emigration Society.....		
Mr. Middlemore, Halifax.....	152	*300
Salvation Army Emigration Agency.....	42	*130
Mrs. Wallis, Toronto.....	13	45
Mrs. Close, Nauwigewauk, N.B.....		
Women's National Immigration Society, Montreal.....		
The Children's Aid Society of London, England.....	24	+
Self-Help Emigration Society.....	13	+
	2,424	15,417

Mr. Bruce Walker, commissioner of immigration, has stated that he could place twenty-five British immigrant boys per month, from March to October, in the western provinces of the Dominion.

Table showing the number of juvenile immigrants who arrived in Canada during the past eight years, together with the number of applications received by the various agencies during the same period :—

Fiscal Year.	Children Immigrated.	Applications Received.
1900-1.....	977	5,783
1901-2.....	1,540	8,587
1902-3.....	1,979	14,219
1903-4.....	2,212	16,573
1904-5.....	2,814	17,833
1905-6.....	3,258	19,374
1906-7 (9 months).....	1,455	15,800
1907-8.....	2,375	17,239
Total.....	16,610	115,408

During my tenure of office I have personally inspected many hundreds of these child-immigrants whilst they were engaged in doing their share of domestic and farm work in various parts of our Dominion, and having listened to the testimony of employers I feel quite justified in reporting that many of the farmers of this country consider the services of the 'Home Child' indispensable.

In passing I should like to say that the designation 'Home boy' or 'Home girl' is perhaps open to misconstruction. It is applied for convenience to immigrant children who have been trained in philanthropic homes or schools in Great Britain, before, and as a preparation for their emigration to Canada, and who are usually taken into the family circle of their employers in this country. The name 'hired boy' or 'hired girl' is often used to describe the same class and is perhaps more appropriate.

On April 1 the Children's Act of 1908 will come into operation throughout Great Britain and Ireland.

* Estimated. ‡ Not reported.

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This enactment is, in my estimation, one of the wisest and most important and valuable measures of recent times. It teems with provisions for the better treatment of the young, their training and education, and declares in effect that every British child has an inalienable right to good food, clothes and a chance to become a useful citizen. It further recognizes the fact that numbers of young children in the old land are so unhappily surrounded as to be deprived of these rights. This legislation will have an important bearing on what is generally conceded to be the finishing touch of the work of juvenile reclamation, namely, emigration.

The transplantation of poor, unoffending children from the motherland to our shores is promoted and carried on by responsible and competent associations of persons—philanthropists in the truest sense—persons prominent in the religious and social world on both sides of the Atlantic, their work being regarded with ever increasing popular favour.

The opinion of Sir John Kirk, of London, one of the most eminent authorities of the day on philanthropic and charitable work and whom it was my great privilege to meet during my visit to the old land last summer, is expressed thus in a recent letter to the *London Daily Post*: 'As an advocate of emigration and as one who has seen the benefits arising from the presence of English children in Canada, I endorse what the commission says on the subject. I would urge the necessity of sending the children over to Canada as soon as possible, because the sooner they get into the Canadian atmosphere the better it is for Canada and for them.' I feel myself the strength of this view. The emigration of juveniles should certainly be effected at as early an age as it is possible to secure situations and foster homes for them in Canada. It is important to remark that it is only under very exceptional circumstances that children whose parents are both living are emigrated by organized agencies and societies. The children to be emigrated are taken in hand at a very early age, and a training along religious and secular lines is immediately begun. During their tutelage they must prove themselves to be worthy before the responsibility of their emigration is assumed. The length of residence in the training homes is not limited but is made to suit each case. A large majority of the children under my supervision have spent the major portion of their lives under the training and influence of the home.

During my visit to Great Britain I had the pleasure of meeting the Right Honourable John Burns, president of the local government board, and in the short interview I had with him he expressed satisfaction with the manner in which the children were looked after in Canada, and said that he believed the emigration of children at the impressionable age could not result otherwise than beneficially.

Four years ago I visited Great Britain and Ireland with the purpose of familiarizing myself with the conditions of pauper and destitute children, both before being received into institutions of a reformatory character and after their reception, and at that time found much to commend in the work of the various agencies. On my second visit during the summer of 1908 I found that remarkable progress had been made during the intervening period, and it was most gratifying to observe a more cheerful and promising outlook than had hitherto existed for the future of the nation's needy and ill-cared for children.

To the people of Canada this is important, as for well nigh half a century there has been annually transplanted to our shores a large emigration from the British isles, amounting it is estimated to an aggregate of nearly sixty thousand juveniles.

The emigration of children has always been a voluntary work as far as it concerns the government of Canada, and, from my point of view, must so continue in order to be successful. No propaganda is, therefore, promoted on behalf of the federal government for the emigration of juveniles. The movement can only be consistently carried on through charitable and religious organizations who undertake it voluntarily.

Sir John Kirk has said: 'Before Queen Victoria ascended the Throne there was not a single measure for the saving of the children; when Her reign closed there were over one hundred.'

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The state has in fact awakened to its responsibility in the matter, and to the national and economic importance of the children of the neglected class, and is actively co-operating with the private and voluntary agencies operating so successfully in their behalf.

While paying visits to these agencies and surveying the wide field of their efforts, I have been made aware of great and unceasing devotion to the cause on the part of persons in various walks of life, and I confess that, as a British subject I have experienced a feeling of pride at the Christian and benevolent attitude of so many of the people of Great Britain in this behalf.

But, notwithstanding the great work that has been accomplished, a survey of the field irresistibly forces one to admit that the result, after all, amounts merely to a drop in the ocean. The necessity for continued effort is patent to any one who pays a visit to the thickly populated and pauperised districts of the old world. But this is evidently well understood over there.

While one must with sadness acknowledge that there is always a class which is, humanly speaking, beyond the hope of rehabilitation in the social scale, it has been most completely demonstrated that there is another class, or one might say another stage in the development of the hapless class for which there is great hope. The juvenile on the verge of the moral precipice may be saved to a life of usefulness and integrity. His loss is the nation's loss, his well-being the nation's gain. But they must be helped to rise and systematically helped.

During my recent visit to England and Scotland I spent a great part of many days and nights in the congested districts of the large cities, and witnessed sights that not only filled me with sadness but with shame for our common humanity. Hundreds and thousands of young children, half-clad, half-fed and wholly untaught in anything that would make for their future happiness or well-being roam these crowded streets, by night as by day. While it is not the wisest policy to relieve the parents of their responsibility towards their children and such action should as far as possible be avoided, yet there is the well-being of the child to be considered and the state also stands in a position of responsibility towards the child which may, and often must, necessitate the removal of such children to environments morally and physically more wholesome.

It has been estimated, and some say conservatively, that there are 250,000 needy children under the age of 18 in Great Britain and Ireland. Of this large army, 25,000 are in industrial and other schools under the Home Office, and 69,000 are under the care of guardians of the poor in scattered village homes. In addition to this census there should be included the fluctuating number dealt with by the Ragged School Union, the Barnardo and other voluntary and private agencies, not overlooking the children who are suffering from want of any supervision whatever. These agencies, I have referred to, are doing a work that cannot at present be fully estimated and the highwater mark in this branch of philanthropy has, I believe, been attained. While a cause such as this necessarily makes demands of magnitude on the state exchequer and on private charity, it is far above all monetary consideration and cannot fail to return to the nation more than is expended. The children require individual attention and moral training far more than they do mental training; at the same time I do not wish to under-estimate the latter.

It was my good fortune to meet in convention at Manchester workers from various parts of the Kingdom. This gathering, which is held triennially, was one of deep interest and most instructive. Those who participated in the deliberation were zealous and enthusiastic and the addresses were remarkably interesting and helpful to one who has the interests of the necessitous juvenile at heart. The audiences were large, thus evincing the keen interest taken in the work of child rescue. It occurred to me, however, if I might be permitted to offer a suggestion, that the scope of the conference might with advantage be enlarged so as to include representatives of the Poor Law

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and voluntary organizations, whose aims and labours are identified with those of the reformatory and refuge unions.

One very interesting feature of the convention was the opportunity afforded of visiting the schools and homes within convenient distances of Manchester. Among these were the industrial and other schools under the Home Office. These industrial schools differ from the industrial schools of Canada which are always semi-penal institutions.

In the English industrial schools useful trades are efficiently taught, and music and gymnastic exercises form, very properly, a feature of the school life. Where children are, necessarily, brought up under strict discipline, and in narrow confines, as I found to be the case in many industrial schools in the cities, such pastimes are essential to their health and physique. The buildings are planned to economize space, yet the interior appeared to me to be up to date and conducive to comfort. In only one school did I feel that the arrangements, in case of fire or other danger, might have been better. The children are not required to wear any uniform or distinguishing badge, but were rather better clad and cleaner than those of the same class outside. The food was good and wholesome and the healthy appearance of the children gave evidence of the care bestowed on them.

The officials impressed me as very capable and as possessing that necessary force of character required for those in their position.

A special visit was paid to the Nile street (Liverpool) Day Industrial School, which differs from other schools mentioned in that it is practically a public elementary school; the children living at home and attending as day pupils. This school is modern and splendidly equipped and must be a great boon to the poor children of that great seaport city. The refining influence of this institution on the children was very marked. What a blessing these schools are! This was impressed on me as I gazed upon the crowds of ill-fed, ragged children who were lined-up opposite this school, drawn there by curiosity at seeing the members of the conference enter the school. There were nearly 100 juveniles and adults in the crowd and one was able to contrast their condition with that of their more fortunate brothers enrolled in the school.

In company with Mr. Courtenay Lord, J.P., of Birmingham, I had the privilege of attending, and being honoured by a seat on the bench, at a sitting of the juvenile court, which, by the way, is the original juvenile court of Great Britain. The first children's court in England was organized in 1905, and, like similar institutions in the United States very soon demonstrated its usefulness. As constituted, there are three magistrates who deliberate collectively and I was pleased to find an entire absence of that judicial atmosphere which, as a rule, pervades police courts. The offenders, or delinquents as they are designated, are summoned for gambling, tossing pennies constituting that charge, vagrancy, sleeping out, being found under prejudicial guardianship, and more serious misdeeds, such as theft in its various degrees. When brought into the court room, the children are spoken to with kindness and tact and given to understand that they are amongst friends and have nothing to fear. I had not been in the court room many minutes before it was apparent to me that the magistrates on the bench were gentlemen, chosen on account of their sympathy with, and desire to help unfortunate children.

The officials of this model court do all that they can to prevent a conviction being recorded against a young person who, in their opinion, is not competent to know what is right and what is wrong. Such a one has never been taught what constitutes good conduct, does not know how to act without committing offence. This coincides with my long formed and deep-rooted opinion that no child under the age of 12 years should be considered competent to answer in court for any transgression, as at such an age its character is still in a plastic condition and is not sufficiently formed to bring it within the range of individual responsibility. In the Birmingham court there is neither undue haste nor formality in the proceedings, the magistrates are most patient with the children and their parents, who are required in nearly every case to accom-

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pany their child to the court. Since this more humane mode of dealing with youthful offenders was adopted, a remarkable reduction has taken place in the number of children committed to prisons, as the following table indicates :—

1904 (committed from Birmingham)....	112
1905 “	33
1906 “	9
1907 “	0

It is reasonable to anticipate that with the adoption of juvenile courts in Canada similar results will follow.

Unless a child is convicted of a very serious crime, and possesses a bad record, it is not sent to prison, but allowed to go on probation for a definite period of supervision under voluntary workers, some of whom are young men of means and university graduates. They report *viva voce*, at each sitting of the court, as to the behaviour, school attendance, &c., of the children individually.

Industrial schools are for the reception of children under 14 who have been found begging, wandering, homeless, &c.

One of the striking features of British justice in relation to the work of reclaiming poor and needy children is that parental rights are, as far as possible, maintained. When children are committed to industrial schools, an order is made by the court requiring the payment by the parent of a nominal amount towards the maintenance of the child in the school. Many, in fact, it may be said the majority of parents, are so impoverished that they are unable to make this small contribution, and in such cases no effort is made to enforce the order.

In addition to the institutions to which I have referred, there are those schools under the supervision of the boards of guardians, which are known as poor law schools, and are conducted under the supervision of the local government board of London.

The children admitted to these excellent training homes are of the orphaned and destitute classes and are there, not from any fault of their own but purely through misfortune. The old morally dangerous system of placing children of the impressionable age in workhouses is being abandoned. Under the guardians, children are placed in cottage homes or boarded out, instead of being housed in large buildings, and are under the supervision of carefully selected foster parents. These Homes are not only distinct from the workhouse, but in many cases are situated in rural districts. An efficient government inspection is maintained and the health of the children receives careful attention. The school curriculum is much the same as that of the public elementary schools.

Another important branch of the work of uplifting needy children is that of the voluntary and private homes and schools. In no other branch of philanthropy is there more beneficial work being carried on. No needy and deserving child is ever turned away from their doors. Agents and voluntary workers are ever at work, searching through the bespattered fringes of British civilization and seeking out cases of unfriended and forlorn juveniles.

Mr. Thomas R. Ackroyd, of Manchester, has fittingly defined the character of the work of the societies in the following well chosen words :—

‘We constrain ourselves to look steadily for our own heartening at the primary object of the work to take the child in all its distress and helplessness from surroundings of misery and degradation, and place it under conditions where it may have a normal chance of a happy child life, and the prospect of growing up to be an honest, industrious and respected member of the community.’

After an arduous career of many years of patient work in the cause of social reform these agencies have had the gratification of seeing their labours rewarded in a degree far beyond their most sanguine expectations.

In the larger cities of England I observed that the policeman is a real friend of the ragged and neglected juvenile and co-operates with the various agencies engaged

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in rescue work. Many a homeless wanderer is stopped at night by the policeman's friendly hand. I have on many occasions seen a policeman late at night leading by the hand a poor, ragged, derelict child of from 10 to 12 years, and endeavouring to locate his home. In London, and in that great seaport, Liverpool, the relation of the police to the child, was much impressed upon me. In his admirable paper, on 'The Police and the Child,' read at the Manchester Conference, Mr. Dunning, head constable of Liverpool, stated :—

'We hope, not without reason, I think, that the child who, in the fright of being lost in the street, has found a friendly hand in that of a policeman, that the child who has to thank a policeman for getting him the first, perhaps the only decent suit of clothes he ever had, that the child whose possession of a trading belt has brought him into relations of intimacy with the police, will as he grows up be more inclined to look upon a policeman as his friend rather than as his enemy and to realize that the law personified in the policeman is something to be respected as a protection to himself rather than as something to be hated and feared as a means of oppression and punishment.'

One of the most admirable features of the work of helping needy children is that exemplified by the system now in operation at Liverpool.

When a policeman finds a poorly clad child in the street special inquiry is made by the officer into the child's home, and it is ascertained whether the parents are in a position to clothe the child properly. The police committee decide if a case be deserving of the attention of the Police Aid Clothing Association, and, if so, the boy, or girl, is supplied with a complete outfit of good, substantial clothing, is granted a special license to sell papers, matches and other articles in the streets and is known as a 'Street Trader.' No child under eleven is allowed to trade in the streets, it being recognized that the street is the worst place for the child.

The license reads as follows :—

YOU MUST NOT SELL ANYTHING IN THE STREETS ON SUNDAYS.

CITY OF LIVERPOOL.

Child Trading License No.

I certify that.... of...., is licensed by the Watch Committee to trade in the streets of the City, under the provisions of the Liverpool Corporation Act, 1902, section 50.

Description of child: Sex....., Age....., Years....., Height: feet...., inches....., Complexion....., Eyes....., Hair....., Figure....., Marks.....

Certified this....day of....190 .

(Facsimile signature.)

(Facsimile signature)

LEONARD DUNNING,

Head Constable.

o 407 L.P.S. Co., 11/7 Est. 3,813.

This certificate will expire on the 31st day of December, 190 .

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A special belt, bearing the consecutive number of the license, is worn and the street trader is then permitted to engage in business. It is stipulated that, if possible, the juvenile trader shall repay a nominal amount of the cost of the clothing supplied and it is manifest that this wise system tends to inculcate habits of thrift and industry in this class of children. It prevents their feeling that they are beggars dependent on the charity of the municipality.

The Ragged Schools' Union of London, the pioneer of philanthropic enterprises, is one of the greatest influences at work for the benefit of humanity in general, and needy childhood in particular in Great Britain. For upwards of 64 years its workers have freely and enthusiastically given their time and have met with an abundant measure of success. The scope of their work includes 285 Sunday schools, with 44,502 scholars, and 4,721 teachers, and 219 bible classes, having 5,334 members: 69 industrial classes attended by 3,029 boys and girls; 116 bands of hope, with 1,962 members.

During the present year the London County Council are expending a considerable amount of money for the purchase of cooking utensils, for the various schools in London where meals are provided for needy children.

Under an Act for the feeding of necessitous school children, those who cannot procure food, have the right to make a demand on the state for relief in their necessity.

In conclusion, let me say that the admirable efforts now being made in Great Britain for the removal of this great stumbling-block from the paths of national and moral progress cannot be over-estimated, and the growing spirit of interest and enthusiasm amongst moral reformers in Great Britain is manifested by such evidences as the admirable 'Children's Bill' previously referred to.

Mr. K. J. Henry's report for the year is as follows :—

'The inspection of British children by me during the past year I found to be much as in previous years—children and employers in the main being satisfactory. Many of those seen before by me showed a marked improvement, not only in growth, dress and knowledge of the farm, but in being more obedient, truthful and inclined to do their part cheerfully and well, attributable largely, I should say, to fair treatment, better sense and the knowledge of shortly being thrown on their own resources. Very many seen will in a few months have reached the age limit and are perfectly competent to look after themselves. Some remain on with their present employers for another year, others in doubt or who have decided to go west take land or work on railways.

'The demand for girls and boys is still as general as in previous years and the desire for fair treatment is even more marked. There are exceptional cases where terms of agreement are not being carried out, whilst in many others they exceed the terms in schooling, clothing and even remuneration. Generally, then, I may say my season's work has been very gratifying.'

Mr. R. W. Hillyard states :—

'Since my last report ample opportunity has been afforded me of becoming more familiar with the interesting work of child emigration to Canada. As my territory comprised a large portion of the provinces of Ontario and Quebec I found myself in touch with children from different homes and agencies. It is my pleasing duty to bear testimony to the general good behaviour and industry of the great majority of those inspected and the satisfactory class of homes selected for them. On inquiry at the public schools where these children attend, the teachers have reported most favourably as to their character and aptitude to learn, in fact some stand first in their forms. Cases have come under my observation emphasizing the importance and value of the work. A youth, now 18, is in receipt of a wage of \$160 and keep for this year. He is a fine looking lad, and employer says "without a stain upon his character." Another boy of 17 took such a deep interest in his work that his employer has purchased a farm for him and will set him up as a farmer. Numbers of these former immigrants I have found in positions of trust and responsibility; some as honoured ministers of churches and others upon their own farms. It is difficult to comprehend the great good accom-

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published by the various agencies and time is revealing the importance of child immigration to our Dominion.'

Mr. Annand, Inspector for the Maritime Provinces, reports as follows :—

'I have the honour to submit my annual report as assistant inspector for Nova Scotia and New Brunswick of British immigrant children. To what extent it has been accomplished may be examined a little in detail.

'First—As to the value of child immigration to Canada of a desirable class. From closest inspection and investigation of many years' experience mingling with all classes and conditions of immigrants, I have not the slightest hesitation in stating that child immigration, under judicious management, is far more advantageous to the country than the adult immigrant with small capital and without energy and ability to take advantage of the resources of Canada. My contention is that the younger the child the easier for it to assimilate the habits of the people of the country. The child of tender years lives and grows up in the land of his or her adoption, acquiring a knowledge of Canadian farm life and other work, as carried out under present surroundings, whereas the adult has set ideas, which are difficult to remove.

'During my inspection last year I found that most of the immigrant boys had made remarkable progress. It was pleasing to find so many proving themselves suitable for farm life and work in our agricultural districts and the girls adapting themselves to domestic work, which proves that later on they will become good housekeepers.

'I was very much impressed with the carefulness displayed by the management of the distributing homes in placing their children so well. I found in most instances that they were contented and well provided for, and the feeling of satisfaction manifested between child and employer was a splendid indication of the improvement over other years. To my mind child immigration has proved an unqualified success.

'In some cases the children's schooling might be given more attention, although it must be said that in certain localities the school is so remote from the home that during inclement weather it would be a hardship for the children to attend.'

Mr. Thomas Cory, Inspector for the Western Provinces of Canada, says :—

'I beg to report that the children under departmental inspection in the western provinces of Canada have been indentured with a good class of farmers, and that, save in one instance, their employers were well pleased with them.

'After their first year's experience the general policy is to increase their wages, and I found in the majority of cases the boys were in receipt of adequate remuneration for their services. Many under the age of 17 have become quite as efficient in their particular work on the farms as men.

'It is a significant fact that I heard no complaints as to character and behaviour. The children were of good types, and reminded me much of the average English school boy. The value of this branch of immigration cannot be over-estimated. During my itinerary it was almost of daily occurrence to receive applications for this class of farm help.'

RECEIVING AND DISTRIBUTING HOMES.

Brief reports follow on my inspection of the various receiving and distributing homes during the year. The great importance of these centres cannot be over-estimated, on account of their helpful influence on the children. While not encouraged to retreat to these homes at a mere whim, the children are given to understand that those in charge are their friends and it is to them they may look for advice and counsel when required.

MR. MIDDLEMORE'S HOME,

Fairview, Halifax, N.S.

The superintendent of this home, which I inspected February 19, reports a very satisfactory year's work. There were eight hundred and two children under the protec-

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tion of this agency. During 1908, ninety-five completed their apprenticeships and were allowed to do for themselves. Health reports were good, only one death amongst their number having occurred. An efficient supervision is maintained, the visitors' reports which I examined showing that particular attention is paid to this branch of the work. Three children were at the home to-day, two boys and a girl having recently returned from their former places.

The home is well equipped and is kept in good order.

THE NEWCOMERS' INN.

Salvation Army Receiving Home, Toronto, Ontario.

On January 6, date of my inspection, there were only two boys in residence. The house is splendidly adapted for a receiving and distributing centre, being within easy distance of the railway stations. It is in charge of Salvation Army officers.

The army is gradually increasing its juvenile emigration work. I have personally inspected a number of its wards and have found them doing very well, being, with few exceptions, suitable types for farm work.

MRS. BIRT'S DISTRIBUTING HOME.

Knowlton, Quebec.

On February 25 my annual visit of inspection to this home was paid.

Twelve children, five boys and seven girls, were in residence. A staff of ladies have charge of the work here and perform their duties efficiently. The home was in good order throughout. Of the large number of Mrs. Birt's immigrants inspected during the year, reports show that, with few exceptions, they are well placed and making satisfactory progress.

THE GIBB HOME FOR BOYS,

Sherbrooke, Quebec.

There was one boy at this home February 24. Seventy boys were received and placed in situations during the year. A larger number of applications than usual for boys for farm work were received.

SELF-HELP EMIGRATION SOCIETY OF LONDON, ENGLAND.

Thirteen boys were emigrated to the Dominion by this society during the past year. They were sent to situations in the provinces of Ontario and Quebec. Of those inspected by this branch of the service few were not doing well.

THE 'COOMBE' HOME,

Hespeler, Ontario.

I paid my annual visit to this interesting distributing home on January 28. The arrangements for the reception, accommodation and employment of children are excellent. Eleven boys and seven girls were in residence, some temporarily, others changing places and a few attending the Hespeler schools before being placed out. I was greatly struck by their intelligence and well kept appearance. They were all engaged, the girls sewing, sweeping or at other domestic duties and the boys at outdoor work.

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MARCHMONT HOME,

Reverend Robert Wallace, Belleville, Ontario.

On January 7 I officially visited Marchmont Home.

Four children only were in residence, two boys and two girls. The system of visiting the children is regularly kept up and their welfare is not in any way, I believe, overlooked. A complete history of each child is recorded.

Mr. Wallace has again found it impossible to supply the applications of the past year for juvenile labour.

MR. J. W. C. FEGAN'S HOME,

Toronto, Ontario.

On April 24 I visited Mr. Fegan's distributing home and as his first party for 1909 had just reached Toronto I was afforded the opportunity of inspecting the children before they had been sent out to their new situations. They were a fine lot, of good physique and intelligence and apparently well selected. A small number only have been removed from their situations during the year. The visitors' reports were most interesting and showed that with few exceptions the boys were doing well and with good farmers and generally in a prosperous condition.

A pleasing feature of the year was the hearty and voluntary manner in which Mr. Fegan's young immigrants contributed towards the expense of emigrating next year's party.

Mr. George Greenway, after a faithful service of many years, has retired and has been succeeded as superintendent by Mr. Richard Render, who had long been identified with Mr. Fegan's work in England.

DR. BARNARDO'S HOMES.

The Barnardo branch homes of this organization are situated in Toronto, Peterborough and Winnipeg. A very active year's work has been prosecuted by these agencies. During the past twelve months their young immigrants numbered 1,034, and the proposed immigration for the approaching year it is estimated will exceed that of previous years.

The demand for juvenile farm labour from these agencies has been insatiable and the general condition of the children under departmental inspection has been found satisfactory. In dealing with such a large number of children it is obvious that some disappointments and failures should rise to the surface. In this connection it may not be uninteresting to quote the following statement from a recent editorial in *Night and Day*, one of the many publications issued under the auspices of Dr. Barnardo's organization: 'Out of nearly twenty-one thousand young people sent by the home to Canada and the colonies not twenty in a thousand have disappointed our hopes.'

The system of placing out and supervising the children in Canada has contributed in a large measure to the success of the work. A large staff is permanently employed for this purpose and visits are made at least once a year. The children are educated, before leaving England, to the fact that in coming to Canada they are to be placed on farms with the result that few are found in other occupation than farming. A regular correspondence is encouraged and carried on with their wards.

The receiving home at Toronto is well equipped and efficiently managed. The children have comfortable quarters during their stay there. For younger children a private elementary school is provided.

The Margaret Cox Home for Girls, at Peterborough, is the chief point of distribution for girls. The house has recently been enlarged by the addition of a wing, through the munificence of the Honourable Senator Cox, who for many years has

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taken a deep interest in Dr. Barnardo's work. The responsibilities entailed by the management of the home and the supervision of such a large number of girls of various ages are discharged by a competent staff of ladies.

THE CHILDREN'S HOME AND ORPHANAGE,

Reverend Dr. Gregory, Hamilton, Ontario.

I personally inspected fifty-four boys at this home, on their arrival from England. In type and intelligence they were a splendid party. Each boy had spent from twenty-one months to five years in their training homes preparatory to emigration. At least twenty of the party left for their places during my visit at the home and all had been allotted places before they actually reached Canada. During the year a large number of their wards have been personally inspected by me in their situations. They were doing well, adequately paid for their services and given good reports by their employers. The home is well arranged and managed.

MISS MACPHERSON'S HOME,

Stratford, Ontario.

On January 26 I paid my annual visit to this home. There were four small children in residence. Their visitor's report indicates that the children under supervision are doing well. The record of each child is carefully kept and information concerning their progress readily available. The home throughout is well maintained and the children receive every attention and comfort during their stay at Stratford.

ST. GEORGE'S HOME,

Catholic Emigration Association, Ottawa.

On March 31 last there were 1,279 juveniles under the direct supervision of the association, nearly all of whom are to be found on farms.

Fewer children were in residence on the occasion of my visit to the home than one might reasonably expect, a circumstance that speaks well for their suitability and contentment with the situations provided for them.

The home is well arranged and in splendid order throughout. There has been a fair emigration of juveniles to the Dominion during the past year, the total number being 307. Of this number 5 only were returned to England. Four visitors are employed in maintaining a supervision of their wards. The system of an annual visitation is kept up and the welfare of the children is not overlooked.

FAIRKNOWE HOME,

Brockville, Ont.

One hundred and seventy-three children from the orphans' homes, Bridge of Weir, Scotland, were placed in situations by this agency during the present fiscal year. They were located chiefly in the eastern counties of Ontario and with few exceptions with farmers.

The superintendent maintains a careful supervision of their wards and their visitors' reports indicated that the children were doing well. The work of this home is held in high esteem by the citizens of Brockville.

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OUR WESTERN HOME,

Niagara-on-the-Lake, Ontario.

My annual visit of inspection to this home occurred August 22 and, as on former occasions, I found the home well maintained and children comfortably quartered during their residence. There were a number of little girls in the home at this date, all of whom I inspected. The younger were attending classes in the private school in connection with the home and others were busily engaged sewing and doing other domestic work.

The pleasure was afforded me of meeting Reverend Mr. Rudolf, of London, England, the executive head of the society, with whom I had an opportunity of discussing the work in its various branches.

Your obedient servant,

G. BOGUE SMART,

Chief Inspector of British Immigrant Children and Receiving Homes.

REPORT OF THE CHIEF MEDICAL OFFICER.

OTTAWA, March 31, 1909.

W. W. CORY, Esq.,

Deputy Minister of the Interior,
Ottawa.

SIR,—I beg to submit my sixth annual report as chief medical officer of the medical inspection of immigrants carried on during the year ending March 31, 1909.

The work has not notably increased in extent during the past year, except in so far as it has been more searching and exact.

The development of the coastwise trade between British Columbia ports and the neighbouring cities of Puget Sound, in the United States, is becoming so rapid, and the influx of immigrants for employment at railway construction, lumbering and mining, so great that it is making the inspection work, both civil and medical at the coast of increasing importance and difficulty. The many avenues of ingress between the Crowsnest Pass and Puget Sound, where only an imaginary line intervenes, create a situation regarding which it is difficult to determine just what the best interests of Canada from the medical standpoint demand. Other questions both moral and social are intimately associated with the physical health of a class of immigrants who have been essentially drifters from one mining camp to another or one railway camp to another in the United States. As the class of labour supplied by them is there constantly in demand, it would appear that, until supplied from elsewhere, the situation requires that through inspection the unfit and undesirable should be weeded out. This is done in part by inspecting officers being placed at Sumas, Blaine and Seattle, inspecting for civil cases, while any physical defects are reported for further examination to the medical officer at Vancouver.

Inspection is carried on with ever increasing care at Atlantic coast ports, the many requirements before sailing serving as well to keep from taking passage immigrants of inferior type physically. In addition, however, to this further measures are being constantly adopted for making the medical supervision by the medical officer, during the voyage, more constant and exact. The bill of health required to be signed by him was printed in last year's report, wherein he is required to state in detail the cases of disease which have come under his observation during the voyage and to sign the report

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to the effect that such are all that occurred during the voyage. This has been followed up by this year's circular which requires a signed statement that the medical officer has made a yet closer and more detailed examination :—

' CANADIAN IMMIGRATION SERVICE.

' *Ship Surgeon's List for Medical Examining Officer.*

' This is to certify that I am the ship's surgeon of the SS.....of the.....SS. line, and that I have daily during the present passage made a general inspection of the passengers on this vessel, and that I have, at least, once during the passage made a detailed individual examination of each immigrant on board, and that I have seen no passenger thereon who, I have reason to believe, is, or is likely to become insane, epileptic or consumptive, or who is idiotic, feeble-minded or afflicted with a contagious, infectious or loathsome disease, or who is deaf, dumb or blind, or otherwise physically defective or whose present appearance would lead me to believe that he or she might be debarred from entering Canada under the Immigration Act, with the exception of the.....persons enumerated below; and that no births or deaths occurred during the passage with the exception of those mentioned underneath.'

(*List follows here.*)

To make the requirements of this circular yet more effective the medical superintendent of the immigration hospital of a seaport is required to notify the head office of the steamship company in the following terms of cases which have been overlooked by the medical officer of the vessel :—

' Port of.....

' SIR,—I beg to inform you that on the SS.....which arrived here on theday of.....there were detained the immigrants mentioned underneath for reasons stated opposite their names. Of this number those whose names are underlined were cases which with proper care should have been reported by your ship's surgeon on "list for medical examining officer," but which were not so reported, and I bring the matter to your attention for such action as you deem advisable.

' Name	Age.	Manifest.	Page.	Line.	Reason for Detention.'
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In this way the steamship company is advised as to the neglect of one of its officers, and ought not to complain, if, after notification and no action is taken to correct the neglect, the medical inspection of their vessel should thereafter take more time on arrival in port.

To illustrate, the following notes are taken from the report of the medical officer at Quebec, on three different ships arriving on the same day :—Detained at hospital, general observation, 1; high temperature, 2; observation of eyesight, 1; mental observation, 2; suspected trachoma, 1; feeble-minded, 1; observation of scalp, 1; suspected epilepsy, 1; observation of eyes, 4.

It will be recalled that, as illustrated by the form printed in last year's report, these requirements of the medical officers are preceded by a signed statement made by the immigrant on purchasing a ticket that he has given correct answers as to his civil status, and in the case of assisted immigrants, accompanied with a complete report to be filled out by a registered practitioner in the country where the emigrant takes passage. When to these really complete precautions, every immigrant is subjected to a thorough observation by a trained medical officer at the port of landing, it must again be insisted upon as was stated in the report for 1907-8 :

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'When in addition to these various measures taken to sift out undesirable immigrants the examination of each person in succession is made by one, and at the large seaports by two medical officers, followed by a thorough civil examination or inquiry into their age, occupation, destination, financial standing and an estimate of their moral qualities and likelihood to succeed in Canada and become good citizens, it would appear that little more could reasonably be done to prevent the ingress of improper persons to the country.'

That the precautions taken to prevent physically undesirable persons from taking refuge in Canada do not cease at the port of landing is seen from the requirements of sections 28 and 33 of the Immigration Act 1906 making it the duty of all clerks of municipalities to report to the Minister of the Interior any cases of insanity, crime or pauperism in immigrants occurring within two years of their landing in Canada.

How effective the operations of these provisions has been is seen in the detail's set forth in Table IX. giving particulars of the deportations in 1908-9.

TABLE I.—STATEMENT showing the Total Number of Vessels Carrying Immigrants Arriving at the Ports of Quebec, Halifax, St. John, North Sydney, Vancouver and Victoria, during the Fiscal Year 1908-9.

Port.	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Totals
Quebec.....	4	28	28	30	27	29	24	15	...	...	...	...	185
Halifax.....	20	7	9	8	5	2	4	6	14	13	14	18	120
St. John.....	11	2	2	3	3	3	3	4	9	12	8	12	72
North Sydney.....	10	18	16	15	16	17	17	15	18	12	7	13	174
Vancouver.....	2	3	4	5	3	4	3	3	3	2	2	4	39
Victoria.....	8	6	6	11	7	7	5	7	7	7	5	6	82
Totals.....	55	64	65	72	61	62	56	50	51	47	36	53	672

As compared with 1907-8 there was a less number by 63 of vessels bringing immigrants to Canada, but that the companies lessened so slightly the number of sailings even though the immigrants by seaports were 87,076 as compared with 204,157 in 1907-8, indicates the conviction that the falling off was but temporary.

TABLE II.—STATEMENT showing the Number of Immigrants Detained and the Number Debarred at Ports since December, 1902 when Medical Inspection was first begun.

Port.	Fiscal Year 1902-3.		Fiscal Year 1903-4.		Fiscal Year 1904-5.		Fiscal Year 1905-6.		Fractional Fiscal Year (9 months) 1906-7.		Fiscal Year 1907-8.		Fiscal Year 1908-9.		Totals.	
	Det'd.	Deb'd.	Det'd.	Deb'd.	Det'd.	Deb'd.	Det'd.	Deb'd.	Det'd.	Deb'd.	Det'd.	Deb'd.	Det'd.	Deb'd.	Det'd.	Deb'd.
Quebec.....	15	15	817	179	1,422	454	1,163	320	523	117	873	278	1,835	251	6,648	1,614
Halifax.....	124	124	705	27	449	36	306	10	392	7	730	274	572	39	3,338	517
St. John.....	134	134	313	68	145	6	396	32	113	13	296	46	502	43	1,899	342
Montreal.....	...	...	...	...	146	2	137	...	208	11	589	9	165	10	1,245	32
North Sydney.....	...	...	...	...	...	...	...	...	...	...	4	4	4	4	8	8
Vancouver and Victoria.....	...	...	...	...	397	113	1,456	118	2,257	242	2,040	455	335	31	6,485	959
New York.....	...	...	...	...	...	...	52	44	50	50	106	106	131	131	339	331
Totals.....	273	273	1,835	274	2,559	611	3,570	524	3,543	440	4,638	1,172	3,544	509	19,962	3,803

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An analysis of the above table is of much interest, and can only be understood by a reference to conditions prevailing in different years. Thus in 1902-3 only a few persons were detained as there was no detention hospital, and the 273 were kept on boardship and returned. In 1903-4 medical inspection was carried on, but the detention hospital was temporary and managed by the steamship companies, except for May and June in 1904. Since then the hospitals have been erected and controlled by the medical officers of the department, but as the hospitals are the only places arranged for compulsory detention of immigrants from any cause, it has occurred that during the year 1908-9 a notable number of detentions have been for causes other than medical, chiefly indeed for lack of funds. Hence the anomaly is explained of how in 1907-8 there were only 4,638 detained and 1,172 debarred, while in 1908-9 there were 3,544 detained but only 509 debarred, the matter of funds having been arranged by friends in Canada.

Remembering that but 87,076 immigrants arrived in Canada via seaports as compared with 204,157 in 1907-8, the increasing strictness of inspection which detained more than five-sevenths as many and debarred nearly half as many may be fairly estimated.

TABLE III.—STATEMENT for the Ports of Halifax, St. John and Quebec, showing the Number of Immigrants Detained and Debarred during the Fiscal Year 1908-9.

SS. Line.	Port.	Number Examined.	Detained.		Debarred.	Ratio of detained to Number examined.	Ratio of debarred to Number examined.
			Males.	Females			
Allan SS. Line.....	Halifax.....	14,124	183	112	19	1 in 48	1 in 743
" "	St. John.....						
" "	Quebec.....	28,413	316	180	105	1 in 57	1 in 270
	Totals.....	42,537	499	292	124	1 in 54	1 in 343
C. P. R. SS. Line.....	Halifax.....	130					
" "	St. John.....	19,261	261	228	43	1 in 39	1 in 448
" "	Quebec.....	23,792	778	205	62	1 in 24	1 in 384
	Totals.....	43,183	1,039	433	105	1 in 29	1 in 411
Dominion SS. Line.....	Halifax.....	2,312	20	14	5	1 in 68	1 in 462
" "	Quebec.....	9,875	172	127	54	1 in 33	1 in 183
	Totals.....	12,187	192	141	59	1 in 36	1 in 206
Donaldson SS. Line	St. John.....	676	12	1		1 in 52	
" "	Quebec.....	2,370	22	12	16	1 in 70	1 in 148
	Totals.....	3,046	34	13	16	1 in 65	1 in 190
Other Lines.....	Halifax.....	3,133	175	68	15	1 in 13	1 in 209
"	St. John.....	252					
"	Quebec.....	70	23		14	1 in 3	1 in 5
	Totals.....	3,455	198	68	29	1 in 13	1 in 119
Grand Totals		104,408	1,962	947	333	1 in 56	1 in 314

It has always been a matter of much interest and importance to compare the ratio of detentions and deportations by different steamship lines since it has been to some extent a measure of the care exercised by the agents in booking desirable immigrants.

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It will be noted that the number of detentions at Quebec of the Allan Line passengers was 1 in 57 in 1908-9 as compared with 1 in 202 in 1907-8, while the rejections were 1 in 270 as compared with 1 in 530 in 1907-8. There were of total passengers via Canadian Pacific Railway to Quebec 1 in 24 in 1908-9 detained as compared with 1 in 151 in 1907-8, while the debarred were 1 in 384 in 1908-9 as compared with 1 in 513 in 1907-8.

The Dominion line had 1 in 33 in 1908-9 detained at Quebec as compared with 1 in 141 in 1907-8, and 1 in 183 in 1908-9 debarred as compared with 1 in 590. The Donaldson line had 1 in 70 in 1908-9 detained at Quebec as compared with 1 in 100 in 1907-8, and 1 in 148 debarred as compared with 1 in 253. As regards the totals as compared with 1907-8, while the grand total of detentions is 1 in 36, the total debarred was 1 in 314, as compared with 1 in 327 for last year.

TABLE IV.—STATEMENT showing Number of Immigrants Detained and Debarred at Montreal, New York, North Sydney, Vancouver and Victoria, for Fiscal Year 1908-9.

Port of Entry.	Port of Arrival.	Total Arriving.	Total Detained.	Total Debarred.	Total Released.	Still in Hospital.
Montreal.....	Philadelphia.....	43	.....	.....	.....	.....
	Baltimore.....	29	.....	.....	.....	.....
	Portland.....	1,806	165	10	155	.....
	Boston.....	759	.....	.....	.....	.....
	New York.....	8,463	.....	.....	.....	.....
North Sydney.....	New York.....	As above...	131	131	.....	.....
	North Sydney.....	4,572	4	4	.....	.....
Vancouver.....	Vancouver.....	6,896	64	14	50	.....
Victoria.....	Victoria.....	3,865	271	17	254	.....
		26,433	635	176	459	.....

The most notable feature in the table is the increased care exercised by the medical officer of the department stationed in New York. Although the total number of immigrants for Canada arriving via New York decreased from 22,381 in 1907-8 to 8,463 in 1908-9, yet the number of rejections has increased from 106 to 131, or relatively from 1 in 211 to 1 in 65. In New York it is evident as at Canadian ports, that relatively the larger the number of immigrants the less is the relative number rejected, probably in part because the larger number up to even 9,000 in a single day, taxes at times the physical capacity of the inspectors beyond the limit of highest efficiency. At Vancouver the ratio of detentions to the total is much lower than at Victoria, as are also those refused admission, viz., of those detained 1 in 107 compared with 1 in 14 and of those debarred 1 in 492 as compared with 1 in 228. It will be remembered that a very notable number of immigrants landed at Victoria are booked to the United States, and that the detention is often made upon reasons given by the United States inspector. Further, as there are many vessels touching at Victoria which afterwards make for American ports, there would seem to be a less select lot of passengers than on vessels of the regular transpacific Canadian lines.

As in other years, the fact that almost all passengers coming from Newfoundland directly to Canada are on business or going to employment either in Canada or the United States adequately explains why only 4 in 4,572 passengers were detained and refused admission. The fact of the inspection has been sufficient to completely prevent the moving by the roundabout route of undesirables, sailing from Havre, debarking at St. John's from ships and then coming overland by rail and entering Canada by the regular mail steamers from the island.

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TABLE V.—STATEMENT by Nationalities of Number of Immigrants Debarred at Ocean Ports, showing Total Arrivals of the same Nationalities for the Fiscal Year 1908-9.

Nationality.	Total Arrivals for Canada and United States.	Atlantic Ports.		Pacific Ports.		Via United States Ports.	Totals.		Totals.
		For Canada.	For United States.	For Canada.	For United States.	For Canada.	For Canada.	For United States.	
Australian.....	362			2	1		2	1	3
Austrian, N.E.S.....	2,131	1				5	6		6
Bohemian.....	37		1					1	1
Bukowinian.....	1,550	8					8		8
Croatian.....	6	1	3				1	3	4
Galician.....	6,710	16					16		16
Hungarian, N.E.S.....	715	3				3	6		6
Ruthenian.....	149					29	29		29
Belgian.....	913					2	2		2
Chinese.....	2,023			1			1		1
Dutch.....	568	2					2		2
French.....	1,929	15	1			2	17	1	18
German, N.E.S.....	1,682	11	6			2	13	6	19
English.....	39,008	84	5		1	3	87	6	93
Scotch.....	12,440	29	1				29	1	30
Irish.....	3,900	15		1		6	22		22
Greek.....	276		3					3	3
Hebrew, N.E.S.....	211					3	3		3
Hebrew, Russian.....	1,542	16	14			2	18	14	32
Hebrew, Austrian.....	24					1	1		1
Hebrew, German.....	15		1					1	1
Italian.....	4,272	4				29	33		33
Japanese.....	546		5	15	3	3	18	8	26
Newfoundland.....	3,050	3					3		3
Poles, N.E.S.....	120	1					1		1
" Austrian.....	44					9	9		9
" Russian.....	278	6					6		6
Persian.....	1		1					1	1
Roumanian.....	313			1		2	3		3
Russian, N.E.S.....	5,091	36	21			30	66	21	87
Finns.....	2,892	1	6			1	2	6	8
Spanish.....	37	3					3		3
Servian.....	50					1	1		1
Danish.....	444		1					1	1
Swedish.....	2,127	1	4				1	4	5
Norwegian.....	2,542					5	5		5
Turks.....	279	2	1				2	1	3
Armenians.....	211	1	1				1	1	2
Syrian.....	227	2				2	4		4
Arabian.....	4					1	1		1
United States citizens	2,728		1	1			1	1	2
Hindoo.....	8			5			5		5
Totals.....	101,455	261	76	26	5	141	428	81	509

As remarked in regard to other tables, the smaller the number of any nationality, the less reliable are any statistics dealing with them. Thus, in the preceding table the Ruthenians are rejected to the number of 29 in a total of 149, the abnormal number debarred being really due to Ruthenian being an ethnic term applicable to Galicians, Bukowinians or Slovaks, referring rather to language and country, and not generally used, the nationality being given. It appears, however, that more than twice as many proportionately of Bukowinians were debarred as compared with Galicians. Both French and German show an abnormally high number debarred, over 9 per 1,000 as compared with English and Scotch between 2 and 3 per 1,000. Russians appear high, being 17 per 1,000, while the Italians are 8 per 1,000 or half as numerous. There were 48 Japanese per 1,000, but only 0.5 of Chinese. Both Swedes and Norwegians are low, being 2 per 1,000, but the Finns are 3 per 1,000.

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Taken together, however, the total 509 debarred was rather less per 1,000 than in 1907-8, compared with the total immigration, the ratio being 1 in 171 as compared with 1 in 174 in 1907-8. It will not be forgotten that the great precautions taken, especially in England and at Hong Kong in 1908-9, prevented, doubtless, numbers sailing of the less desirable class.

TABLE VI.—STATEMENT showing the Total Number of Chinese, Japanese and Hindoos detained, released and debarred at the Ports of Vancouver and Victoria, during the Fiscal Year 1908-9.

Nationality.	Total Number Arriving.	Detained.	Released.	Debarred.	Number still in Hospital.
Vancouver—					
Chinese.....	1,209	36	35	1	
Japanese.....	81	22	15	7	
Hindoos.....					
Totals.....	1,290	58	50	8	
Victoria—					
Chinese.....	778	247	247		
Japanese.....	453	18	7	11	
Hindoos.....	5			5	
Totals.....	1,236	270	254	16	

For 1908-9 the total number of Orientals arriving at Vancouver and Victoria was 2,526, as compared with 12,920 in 1907-8, the Chinese immigration maintaining a very even ratio from year to year, but the Japanese to Vancouver having practically ceased arriving. The number arriving by the various transpacific lines touching at Victoria is greater, it being not unusual for Japanese, going to the United States ultimately, to book to Victoria on the steamers which make it their first port of call. The total debarred of the whole immigration was 24 in 2,526 or 10 per 1,000.

TABLE VII.—STATEMENT showing the Disease and other causes for which Immigrants were detained at the Ports of Quebec, Halifax, St. John, Montreal, North Sydney, Vancouver, Victoria and New York, during the Fiscal Year 1908-9.

Class of Disease.	Cause of Detention.	Number Detained.	Number Released.	Number Rejected.	Number still in Hospital.
I. Contagious diseases.....	Scarlet fever.....	1	(died 1)		
	Measles.....	10	(died 1) 9		
	Erysipelas.....	3	3		
	Typhoid fever.....	1	1		
	Totals.....	15	15		
II. General diseases.....	Tuberculosis.....	18	(died 1) 5	12	
	Lupus.....	1		1	
	Alcoholism.....	8	3	5	
	Furuncle.....	1	1		
	Rheumatism.....	3	3		
	Totals.....	31	13	18	

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TABLE VII.—STATEMENT showing the Disease and other causes for which Immigrants were detained at the Ports of Quebec, Halifax, St. John, Montreal, North Sydney, Vancouver, Victoria and New York during the Fiscal Year 1908-9—*Continued.*

Class of Disease.	Cause of Detention.	Number Detained.	Number Released.	Number Rejected.	Number still in Hospital.
III. Eye diseases.	Trachoma	456	340	94	22
	Conjunctivitis	330	329	1	
	Corneal ulcer	4	4		
	Choroiditis	1		1	
	Trachomatous cicatrization	19	19		
	Cataract	1		1	
	Defective sight	18	10	7	1
	Blindness	1		1	
	Loss of an eye	9		9	
	Pterygium	2	2		
	Corneal opacity	1		1	
	Observation of the eyes	66	65		1
	Totals	908	769	115	24
IV. Nervous system	Insanity	15	1	13	1
	Hysteria	1		1	
	Epilepsy	2	1		1
	Paralysis	4	2	1	1
	Feeble-minded	37	14	23	
	Locomotor ataxia	1		1	
	Muscular atrophy	2		2	
	Nervousness	1	1		
	Homicidal delusions	1			1
	Observation of mind	4	4		
	" nervous system	2	2		
	Totals	70	25	41	4
V. Circulatory system	Heart disease	9	4	5	
	Varicose veins	1		1	
	Totals	10	4	6	
VI. Respiratory system	Bronchitis	1	1		
	Tonsilitis	2	2		
	Pneumonia	10	(died 1) 8		1
	Inflammation of lungs	1	1		
	Emphysema	1		1	
	Hemorrhage	1	(died 1)		
	Observation of lungs	1	1		
	Non-malignant growth on vocal chords	1	1		
	Totals	18	16	1	1
VII. Digestive system	Hernia	5	1	3	1
	Appendicitis	4	(died 1) 3		
	Enteritis	1	1		
	Cirrhosis liver	1		1	
	Dysentery	3	3		
	Intestinal hemorrhage	1	1		
	Totals	15	10	4	1
VIII. Genito-urinary system	Syphilis	2		2	
	Gonorrhoea	1		1	
	Conjestion of kidneys	1	1		
	Totals	4	1	3	

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The preceding table gives the list of persons detained and placed in the detention hospitals at the several seaports for all causes in 1908-9 as 3,544, as compared with 4,638 in 1907-8. The marked falling off in the total immigration this year has been already noted and it will be seen that in 1908-9 more proportionately have been under the heading of 'Likely to become a public charge,' there having been 1,976 detained as compared with 178 in the previous year. The financial requirements were met especially by friends in Canada as seen in the fact that 1,837 were subsequently released and sent forward. The criminals were 11 as compared with 21 in the previous year. Under the classes of disease there were a few cases of acute contagion, especially 'measles,' developed, as in former years. Their paucity during the past five years has been very remarkable, there having been only the following :—

Disease.	1904-5.	1905-6.	1906-7.	1907-8.	1908-9.
Scarlet fever.....					1
Diphtheria.....		2			
Quinsy.....		1			
Chickenpox.....			1		
Measles.....	1	19	4	18	10
Erysipelas.....				1	3
Typhoid.....			1	2	1
Mumps.....			1	1	

Of the constitutional diseases in Class II., as might be expected, 'tuberculosis' shows the most cases, 18 in all, of whom 1 died in hospital and 10 were deported. Last year 27 were detained and 11 deported. Cases of chronic drunkenness have been dealt with promptly, 8 having been detained and 5 deported as 'alcoholics' as compared with one last year. Such are clearly a class for which Canada has no need or any room. Probably the most notable decrease in disease is in Class III., including eye diseases. Last year 2,856 were detained and 385 deported, whereas in 1908-9 there were 908 only detained and but 115 deported. The notable decrease is in consequence of the less detentions on account of ophthalmia in Orientals. Class IV., includes diseases of the nervous system under which are the detentions for insanity, these being 15 as compared with 20 in the previous year, of whom 13 were debarred.

There were fewer epileptics, 2 as compared with 8 in the previous year, but 37 were detained as 'feeble-minded' as compared with 18, of whom 23 were rejected as compared with 13 last year.

Class V., 'Diseases of Circulation,' has but 10 cases, of which 5 cases of heart disease were deported. Similarly Class VI. has but 18 cases, including bronchitis and pneumonia, this being good proof that there was not overcrowding on shipboard.

Class VII., 'Diseases of the Digestive system,' naturally has few, most of them being chronic 'hernia.'

Similarly, Class VIII. has, as could be expected, but few cases.

Class IX. has the usual number of 'Diseases of the Skin,' especially of the two chronic contagious ones, 'favus' and 'ringworm,' there being 9 of the former and 19 of the latter as compared with 10 and 64 last year. They were either deported or kept in hospital and treated at the expense of the steamship companies, being otherwise desirable.

Under Classes X., XI. and XII. were included 55 cases of malformations, injuries and other ill-defined cases.

Taken all together the competent observer will agree that in the total inspected at the seaports, the list illustrates a remarkable freedom from disease in the immigrants arriving in Canada, and that the sifting has been thorough will be drawn from a later table showing the small number of cases deported on account of disease.

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TABLE VIII.—STATEMENT of Deportations from Canada during the Fiscal Year 1908-9,
by Nationalities.

African, South..	1	Hebrew, N.E.S..	32
Australiau..	1	Hebrew, Russian..	11
Austrian, N.E.S..	17	Hebrew, Austrian..	2
Bohemian..	3	Italian..	13
Buckowiian..	4	Japanese..	4
Galician..	16	Polish, Russian..	3
Hungarian, N.E.S..	1	Roumaniau..	42
Ruthenian..	1	Russiau, N.E.S..	49
Belgian..	2	Finnish..	3
Bulgarian..	74	Spanish..	1
Chinese..	1	Swiss..	2
Dutch..	12	Danish..	4
French..	18	Swedish..	7
German..	7	Norwegian..	2
English..	1,081	Turkish..	20
Welsh..	1	Syrian..	1
Scotch..	119	U. S. Citizens..	95
Irish..	34	Negro..	1
West Indian..	3	Hindoo..	24
Jamaican..	1		
Greek..	32	Grand total..	1,748

TABLE IX.—STATEMENT of Deportations from Canada during Fiscal Year 1908-9,
by Causes.

I. General—		VI. Digestion—	
Tuberculosis..	54	Hernia..	2
Alcoholism..	27	Fistula..	1
Rheumatism..	15		
Syphilis..	4	VII. Genito-urinary—	
Diabetes..	2	Chronic cystitis (bladder)..	1
Cancer..	2	Kidneys (Bright's)..	2
Abscess..	1		
Anaemia..	1	VIII. The skin—	
Exophthalmia..	1	Eczema..	1
Hip disease..	1		
II. Eyes—		IX. Malformation—	
Defective sight..	11	Seulility..	10
Cataract..	1	Deafness..	4
Trachoma..	1	Blindness..	3
		Spinal curvature..	1
III. Nerves—		Crippled..	11
Insane..	113	Potts disease..	2
Feeble-minded..	35		
Epilepsy..	22	X. Accident—	
Paralysis..	4	Frostbite..	3
Nervous debility..	1	Injured..	3
Loss of memory..	1	Rupture..	6
Paresis..	1		
Acute nostalgia..	1	XI. Ill-defined—	
IV. Circulatory—		Physical debility..	82
Heart disease..	13	Physical and mental debility..	14
Varicose veins and ulcer..	7		
V. Respiratory—		XII. Other—	
Bronchitis..	1	Public charge..	1,074
Emphysema..	1	Criminal..	115
		Vagrancy..	56
		Accompanying..	21
		Prostitution..	8
		Bad character..	7

The causes for deportation are seen to have been chiefly civil rather than medical, there having been 1,074 public charges. Those deported for criminal causes show a remarkable increase over the previous year, there being 115 as compared with 49. It illustrates the truth contained in immigration returns of different past periods that whenever there has been a depression in business and a lack of employment, there is an increase in criminal returns, part of it being due to the fact that many vagrants and others have charges preferred against them in order that they may be taken charge of.

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As usual the larger number of deportees are included in two classes of general constitutional diseases and nervous diseases. Of the first there were 108, including 54 cases of tuberculosis and 27 of alcoholism. Of nervous diseases there were in all 178, including 113 cases of insanity, 35 feeble-minded and 22 cases of epilepsy.

The cases both of tuberculosis and insanity approximate the total of 1907-8, being 54 as compared with 70 and 113 as compared with 122. That the deportation of 'chronic' undesirables is being steadily carried out is best illustrated by the fact that 27 were deported on account of alcoholism as compared with 1 in 1907-8, as well as by the fact that 35 feeble-minded were deported as compared with 13 last year and 22 epileptics as compared with 10 the previous year.

The remarkable results of constant inspection of immigrants for eye trouble are seen in the fact that only 1 person was deported on account of trachoma and 12 for defective sight from all causes.

Various other diseases were causes of deportation, but no one of them assumed any degree of importance.

The foregoing tables have illustrated the various features of medical interest in the immigration of 1908-9, so far as the work in Canada is concerned. What was done in foreign countries, as England, to prevent the unfit from taking passage, will appear elsewhere; but that many were so prevented through an examination and certificate being required in many cases may fairly be inferred. Comparison of those rejected with those of previous years shows that the number finally rejected at the seaports has not notably differed in ratio from those in 1907-8 and seems to indicate that the approximate maximum of efficient work at the seaports under existing methods of inspection and requirements of the Act has been reached. The deportations as illustrated in the preceding table for the most part of persons from Great Britain and Europe, have removed from amongst the newcomers the dregs, until it is probable that fewer defectives per 1,000 actually exist in the immigrants than in an equal number of the same class amongst the native born. The notable absence of mental defectives amongst the peoples from southern countries is a matter of much interest and, contrary to a too popular opinion, it appears that if compulsory education can be generally enforced we have in such races not only an industrial asset of great value but also the assurance of a population remarkably free from the degenerative effects seen in those classes which have been for several generations factory operatives and dwellers in the congested centres of large industrial populations. Recognizing the constant and increasing need of a population, not only capable of but willing to do the rougher work of opening up new areas by building railways and canals, we may consider it a fortunate matter if such can be obtained of clean blood and much native energy, only requiring the influence of social and educational environments to transform them into good citizens and absorb them into the masses of our law-abiding and progressive communities.

Respectfully submitted,

P. H. BRYCE,
Chief Medical Officer.

PART III

SURVEYS

SURVEYS

REPORT OF THE SURVEYOR GENERAL.

DEPARTMENT OF THE INTERIOR,

TOPOGRAPHICAL SURVEYS BRANCH,

OTTAWA, May 27, 1909.

The Deputy Minister of the Interior,
Ottawa.

SIR,—I have the honour to submit the following report of the Topographical Surveys Branch for the fiscal year ended March 31, 1909.

During 1908 there was a demand for extensive surveys in what was formerly called the 'semi-arid' district, those portions of the northwest provinces lying between the Canadian Pacific railway and the international boundary and between Moosejaw and Lethbridge. About one hundred and forty-five townships in this district were subdivided during the year. It is expected that the surveys in this tract will be completed during 1909. Surveys were also extended in the country north and west of Edmonton, north and east of Prince Albert and in the northern part of Manitoba.

To secure more permanent monuments for quarter section corners it was decided to use iron posts instead of wooden ones. Formerly iron posts were used only at section corners. Many surveys in wooded country are performed during the winter. Iron posts as well as being more permanent, are much more easily driven into the frozen ground.

Formerly the laws governing the survey of Dominion lands were comprised within the Dominion Lands Act, but in 1908 they were embodied in a separate Act called the Dominion Lands Surveys Act which was assented to March 17, 1908. The chief changes by the new Act are in relation to the resurveys of lands and the correction of errors; the Minister is given power to order a resurvey upon receipt of a petition from the owners of the lands or from parties interested as homesteaders, licensees, &c., and after public notice has been given in the *Canada Gazette* and a local newspaper for a period of four weeks. In the case of the correction of errors provision is made for compensation on account of the loss of improvements by the correction. This compensation is payable by the party acquiring the improvements, and the amount is fixed by the Minister or by an award of three arbitrators. Several resurveys and a few correction surveys have been already made under the provisions of the new Act.

SURVEYS FOR THE YEAR ENDED MARCH 31, 1909.

Like the spring of 1907, the spring of 1908 was unusually wet and surveyors had great difficulties in taking their outfits and supplies to the different localities where they were to work. Progress in the early part of the season was slow but after the wet period was over, the weather generally was very favourable for survey operations. Complete subdivision was made of three hundred and twelve whole and of twenty-three fractional townships, while a partial subdivision was made of one hundred and sixty-one other townships. In addition a complete resurvey was made of fifteen whole townships and of five fractional ones as well as a partial resurvey of one hundred and fifty-one others.

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Seventy survey parties were in the field, sixty of which were engaged on township work and ten on miscellaneous surveys. Thirty-nine of these parties were paid by the day and thirty-one worked under contract. Of the parties under daily pay, four were employed in Manitoba, six in Saskatchewan, fifteen in Alberta, eight in British Columbia, one on the boundary between British Columbia and Yukon Territory and two in the Northwest Territories, while three others were part of the time in one province and part of the time in another. Of the parties under contract seven were located in Manitoba, eight in Saskatchewan and fifteen in Alberta, while one contract was partly in one province and partly in another.

Five parties under daily pay in charge of Messrs. P. R. A. Belanger, E. W. Hubbell, G. J. Lonergan, C. F. Miles and L. E. Fontaine were engaged for the greater part of the time on the inspection of surveys performed under contract. Forty contracts were examined during the year. The balance of the time of the inspectors was given to the investigation of reported errors, the correction of errors and the performance of other miscellaneous surveys.

The reports of the surveyors who were working under daily pay are given as appendices No. 13 to No. 50 of this report. The field of operations embraced the country extending from the eastern boundary of Manitoba to the western boundary of Alberta and from the international boundary as far north as township 107, a distance of about 650 miles. It embraced, also, almost the entire railway belt in British Columbia.

MISCELLANEOUS CORRECTION, RESTORATION AND TOWNSHIP SUBDIVISION SURVEYS.

Mr. C. F. Aylsworth, D.L.S., continued resurvey work in the vicinity of Beausejour, in eastern Manitoba.

Messrs. C. E. Bourgault, D.L.S., and W. J. Deans, D.L.S., made several correction surveys and some resurveys in eastern Saskatchewan. Mr. Deans travelled more than 500 miles during the performance of his surveys. He found the great need in that country to be an adequate system of drainage.

Messrs. T. A. Davies, D.L.S., Jas. Warren, D.L.S., and W. H. Young, D.L.S., were engaged in extending subdivision surveys in southwestern Alberta, in the foothills of the Rocky mountains. Owing to the nature of the country survey operations in this vicinity are very tedious and difficult.

Mr. Thos. Fawcett, D.T.S., retraced a portion of the fourth meridian in southern Alberta and made several correction surveys in Saskatchewan. His report contains an interesting description of the country he passed over.

Messrs. Geo. McMillan, D.L.S., W. R. Reilly, D.L.S., and R. H. Montgomery, D.L.S., were engaged in miscellaneous resurveys and correction surveys in the vicinity of Prince Albert, Saskatchewan. Mr. Reilly expresses the opinion that the north country offers special inducements to the settler of small means, as the wooded homestead furnishes timber for building and wood for fuel, while winter employment may always be had with the lumbering companies.

Mr. T. H. Wiggins, D.L.S., was engaged for only a short period on a correction survey near Saskatoon, Saskatchewan.

SUBDIVISION SURVEYS IN THE PEACE RIVER DISTRICT.

Messrs. H. S. Holcroft, D.L.S., J. B. Saint Cyr, D.L.S., and H. W. Selby, D.L.S., were employed on necessary township subdivision and settlement surveys in the Peace River district. They all speak well of the success which settlers are meeting with in that country and foretell a prosperous future, when satisfactory means of transportation will be available.

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SURVEYS OF BLOCK OUTLINES.

Portions of the eighth and ninth base lines west of the principal meridian were resurveyed by Wm. Christie, D.L.S., to locate an error which was indicated by the closings of these lines with other lines previously surveyed. The accuracy of subdivision surveys depends on the accuracy of the base lines; it was therefore necessary to locate and correct the error before the dependent subdivision surveys could be proceeded with.

Mr. A. H. Hawkins, D.L.S., surveyed a portion of the twelfth base and completed the survey of the thirteenth base west of the sixth meridian while Mr. A. Saint Cyr, D.L.S., surveyed a portion of the fifteenth base west of the fifth meridian and produced the sixth meridian from the fourteenth base south to the quarter section corner on the east boundary of section 25 in township 47. A perusal of the reports of Messrs. Hawkins and Saint Cyr will give a clear idea of the almost insurmountable difficulties encountered by surveyors who undertake the surveys of the governing lines in our system of survey.

Mr. A. W. Ponton, D.L.S., produced the fifth initial meridian through townships 85 to 107, inclusive. It was necessary to establish this meridian in order that base lines might be extended from it in any direction where subdivision may be required. Large settlements are already in existence on Peace river and there is some demand for subdivision surveys.

Mr. B. J. Saunders, D.L.S., produced the eleventh base line west of the fifth meridian from range 8 to range 19.

MISCELLANEOUS SURVEYS.

Mr. David Beatty, D.L.S., made a compass survey of the limits of Porcupine forest reserve northwest of Swan River, Manitoba.

Mr. A. McFee, D.L.S., surveyed the boundaries of Buffalo Park reserve near Hardisty, Alberta.

Some necessary surveys at The Pas in the Northwest Territories were performed by Mr. E. R. Bingham, D.L.S. He foretells an important future for this settlement when the Canadian Northern railway is completed that far.

Mr. P. A. Carson, D.L.S., continued the triangulation in the railway belt, British Columbia, south and west of Golden.

A survey to locate some coal lands on the south branch of Brazeau river in Alberta was made by Mr. T. D. Green, D.L.S.

Mr. J. E. Morrier, D.L.S., surveyed a townsite at Fort Churchill. His report gives much valuable information as to the conditions of life there and the possibilities of the country.

Necessary surveys at lakes Louise and Minnewanka, in the Rocky Mountains park, were done by Mr. A. C. Talbot, D.L.S.

Mr. W. Thibaudeau, C.E., made a preliminary investigation of the water-powers of several streams in southwestern Alberta. A mass of valuable information is furnished by his report and the maps to accompany it, which are published herewith.

Mr. J. N. Wallace, D.L.S., established the Yukon-British Columbia boundary between the Tatshenshini and Takhini rivers, a distance of about thirty-six miles.

An examination of the vacant lands in the valleys of the railway belt, British Columbia was undertaken by Mr. A. O. Wheeler, D.L.S., for the purpose of classifying them under five heads, viz., fruit land, farming land, grazing land, timber land and worthless land. Mr. Wheeler had under his direction two sub-parties in charge of Messrs. M. P. Bridgland, D.L.S., and H. G. Wheeler respectively. The valley lands above and below Revelstoke and above Golden were examined.

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BRITISH COLUMBIA SURVEYS.

For some years past two surveyors, Messrs. J. E. Ross, D.L.S., and A. W. Johnson, D.L.S., have conducted practically all the Dominion land surveys in the railway belt. Owing to the great increase of work consequent upon the assumption by the Department of the control of timber berth surveys and upon the considerable increase in the applications for subdivision surveys it was found necessary last year to employ two more parties under Messrs. T. H. Plunkett, D.L.S., and E. W. Robinson, D.L.S., respectively. These two parties, as well as the party under Mr. A. W. Johnson, were engaged in the Kamloops district. Mr. J. E. Ross was employed in the western portion of the railway belt. Some small surveys were performed by Mr. J. A. Kirk, D.L.S.

LATITUDE ON THE FIFTH MERIDIAN.

In the spring of 1908 Mr. G. Blanchard Dodge determined the latitude of the fifth meridian near the Athabaska river in order to ascertain the error in latitude of the corner monuments near that place. The fifth meridian was being extended northerly to the Peace river by Mr. A. W. Ponton and to guard against errors in chainage, he was instructed to observe for latitude from time to time, but this could not serve as a check unless he knew the error at his starting point near the Athabaska river. It was shown by Mr. Dodge's observation that the error was practically nothing.

The following is a comparison of the mileage surveyed every year since 1906:—

	April 1, 1908, to March 31, 1909.	April 1, 1907, to March 31, 1908.	Jan. 1, 1906, to March 31, 1907.
	Miles.	Miles.	Miles.
Township outlines.....	2,019	1,674	1,306
Section lines.....	16,985	13,710	8,962
Traverse.....	3,323	3,193	1,848
Resurvey.....	2,175	2,917	4,948
Total for season.....	24,502	21,494	17,064
Number of parties.....	67	59	56
Average miles per party.....	366	364	305

The following table shows the mileage surveyed by the parties under daily pay, and by the parties under contract :—

WORK OF PARTIES UNDER DAILY PAY.

	April 1, 1908, to March 31, 1909.	April 1, 1907, to March 31, 1908.	Jan. 1, 1906, to March 31, 1907.
	Miles.	Miles.	Miles.
Township outlines.....	512	542	756
Section lines.....	1,004	975	1,035
Traverse.....	1,154	1,313	643
Resurvey.....	2,175	2,782	4,815
Total for season.....	4,849	5,612	7,249
Number of parties.....	36	29	29
Average miles per party.....	135	194	250

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WORK OF PARTIES UNDER CONTRACT.

	April 1, 1908, to March 31, 1909.	April 1, 1907, to March 31, 1908.	Jan. 1, 1906, to March 31, 1907.
	Miles.	Miles.	Miles.
Township outlines.....	1,507	1,132	550
Section lines.....	15,981	12,735	7,927
Traverse.....	2,165	1,880	1,205
Resurvey.....		135	133
Total for season.....	19,653	15,882	9,815
Number of parties.....	31	30	27
Average miles per party.....	634	529	364

NOTE.—Owing to the nature of their work the parties under Messrs. P. A. Carson, W. Thibaudeau and A. O. Wheeler are not included in the statement of mileage for the year ended March 31, 1909.

The following statement shows the average cost per mile of surveys done by contractors and by surveyors under daily pay for the year ended March 31, 1909 :—

	Surveys made under day pay.	Surveys made under contract.
Total mileage surveyed	4,849	19,653
Total cost	\$ 323,054 13	\$ 358,364 61
Average cost per mile.....	66 62	18 23

DESCRIPTIONS OF TOWNSHIPS.

Descriptions of the townships subdivided during the year have been compiled from the surveyors' reports and are given as appendix No. 51 of this report. The descriptions are in the order of township, range and meridian and are preceded by a list of the townships described.

A map accompanies this report which shows in different colours the surveys performed prior to March 31, 1908, the subdivision surveys between March 31, 1908 and March 31, 1909, and the resurveys during the same period.

ALLOWANCES AND REMUNERATION FOR SURVEYORS UNDER DAILY PAY.

In order to induce properly educated men to qualify as Dominion land surveyors, so that the Department would have no difficulty in securing the services of competent men to carry on the surveys according to the improved, accurate and scientific methods of the present day, an Order in Council was passed on April 6, 1908, increasing the rates of pay from \$6.50 and \$7.50 per day for ordinary and block outline surveys to \$8 and \$10 per day, respectively. The remuneration of Inspectors of Surveys who are employed continuously was set at \$9 per day while in the field and \$5 per day while engaged at office work. Allowances to surveyors engaged under daily pay were set by Order in Council of April 11, 1905. These allowances were intended only for surveyors in charge of full survey parties and were found insufficient when a surveyor was engaged on a survey where he was accompanied by an assistant only. To meet this case a living allowance of \$2.50 per day each was granted to the surveyor and his assistant by Order in Council of October 16, 1908.

RATES FOR SUBDIVISION SURVEYS.

Previous to the spring of 1908 the rates for subdivision surveys had been fixed by several Orders in Council. For convenience of reference and to better define the

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different classes of work and thus remove causes for differences of opinion between contractors and the Department these several orders were consolidated by Order in Council of May 12, 1908. No change was made in the rates. The schedule of rates annexed to the Order in Council is as follows :—

Schedule of rates to be paid for township subdivision surveys of Dominion Lands executed under contract.

1. Section lines shall be paid for at the rate of three dollars and fifty cents per mile of line surveyed.

2. A further payment at the rate of fifty cents per chain up to ten chains in a section side, shall be made for opening, cutting and blazing the line through woods, windfalls, under-brush or heavy scrub.

3. Any opening, cutting and blazing of the line in excess of ten chains in a section side shall be paid for at the rate of twenty-five cents per chain. If the mileage charged for by the contractor for opening, cutting and blazing of lines exceeds that reported by the Inspector of Surveys, the contractor's account shall be reduced accordingly, the deduction being applied over the whole contract. No deduction, however, shall be made if the contractor's charge does not differ from the Inspector's by more than five per cent. If the lines are not sufficiently blazed a deduction may be made at such rate as the Inspector of Surveys recommends, but not exceeding two dollars per mile.

4. For the interpretation of Clauses 2 and 3, a section line shall mean the distance between two monuments at section corners or the places assigned to such corners, and this distance may include a road allowance.

5. No payment shall be made under the provisions of Clauses 2 and 3 where the line could have been measured without opening and cutting. A strict interpretation shall be given to these clauses and the field notes must show every opening of half a chain or more where no cutting was necessary in order to measure the line.

6. The part of a line chained across a marsh or other body of water, except on the ice, or measured across water by means of a triangulation, shall up to half a mile, be paid for as opening through woods when the body of water is surrounded by continuous woods. When such measurement exceeds a mile in length, one-half the distance shall be paid for as opening through woods. Distance measured by means of improper triangles shall not be paid for.

7. When the side of a section, exclusive of road allowance, is greater than ninety chains or smaller than seventy chains, the number of chains of opening or cutting which may be paid for at the rate of fifty cents per chain shall be increased or reduced in proportion to the length of the section side.

8. Only the lines actually run and marked in the field shall be paid for. Nothing shall be allowed for random and trial lines, bases of triangles and offsets. A single payment only shall be made for the north and south boundaries of townships, although they must always be run twice under the provisions of the Manual of Survey.

9. A further payment at the rate of three dollars per mile shall be made for section lines surveyed over rough or hilly country. A section side shall be classed as rough or hilly when the field notes show that it crosses a ravine not less than 100 feet deep or two ravines not less than fifty feet deep, or that the difference of level between two points of the line not more than half a mile apart exceeds 200 feet, the depths or heights being measured by aneroid barometer. In case the corner of the section falls in the ravine or on the side of the hill, payment shall be made for either of the adjoining sections but not for both.

10. A further payment at the rate of four dollars per mile may be made upon a report of the Inspector of Surveys, concurred in by the Surveyor General, stating that the survey presented unusual difficulties on account of large rivers flowing through

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deep valleys with the surrounding country broken by gullies ; or on account of exceptional extensive and deep marshes. This payment shall not be made for difficulties other than those mentioned or for marshes which have been crossed on the ice. Payment, if made, shall be for the number of miles recommended in the Inspector's report.

11. A further payment at the rate of four dollars per mile shall be made for surveying the meridian outlines of a township when such outlines are included in a subdivision survey contract, but such payment shall not be made for resurveying or re-tracing lines previously surveyed.

12. Section lines resurveyed or retraced by direction of the Surveyor General, or under the provisions of the Manual of Survey, shall be paid for at the same rate as original section lines in the subdivision of a township, but no payment shall be made for the part of an outline chained under the provisions of the Manual of Survey for testing the chainage. Lines resurveyed or retraced without authority shall not be paid for. The fact that a line is obliterated or that a monument cannot be found shall not be deemed sufficient authority to resurvey or retrace the line.

13. A further payment at the rate of twenty-five cents per pit in prairie, and forty cents per pit in the woods, shall be made for erecting a boundary monument, such payment to cover the cost of planting and marking the post, building the mound and otherwise completing the monument. A witness trench shall be paid for as four pits. A stone mound shall be paid for as four pits in the woods. A long quarter section post planted in a marsh shall be paid for as two prairie pits.

14. Traverses of lakes and rivers and connecting traverses shall be paid for at the rate of eleven dollars per mile, for traverses of lakes and rivers, the distance to be paid for shall be measured along the bank of the lake or river from every point fixed by the survey in a straight line to the next point. Nothing shall be paid for offsets, but one dollar shall be deducted for every offset short of the number required by the Manual of Survey.

15. One dollar shall be paid for every statutory declaration of a settler.

16. A payment at such rate as the Surveyor General may allow, but not exceeding two dollars per mile of township outline or section line surveyed, may be made for the determination of the astronomical direction of the line of the survey.

17. The above allowances shall cover the cost of preparing the returns of the survey.

18. Iron posts used on the survey of Dominion lands will be supplied free of cost at Winnipeg and at every other place where they are kept in stock. Posts not used shall, if not returned to stores, be charged to the surveyor at forty cents each.

19. A deduction at the rate of six cents per cubic foot for deficiency in the size of the pits in excess of a foot and a half per pit shall be made from the payments to survey contractors. Further deductions at such rates as the Inspector of Surveys may recommend, shall be made for deficiencies in survey monuments, whether the deficiency be in the scattering of earth away from the pits, the marking or driving of the posts or in the general character of the monument. These deductions shall be averaged on the monuments examined by the Inspector and shall be applied to the whole contract. Should the total amount of the deductions calculated as above, exceed thirty per cent of the amount allowed for erecting the monuments, or should the Inspector report that the monuments are too unsatisfactory to be accepted, the contractor shall be required to repair and correct them according to the standard required by the Manual of Survey.

20. The lines embraced in any survey under contract must be surveyed by the surveyor in person ; no payment shall be made on such contract work if otherwise performed.

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SUPPLEMENT TO THE MANUAL OF SURVEY.

In 1892 a fourth edition of the Manual of Instructions for the Survey of Dominion Lands was issued containing thirteen tables specially adapted to the survey of Dominion lands. The fifth and sixth editions issued in 1903 and 1905, respectively, contained only eight tables. The tables omitted were those seldom used and it was thought that when needed they could be referred to in the fourth edition.

The fourth edition having become scarce a reprint of the tables was necessary. The Manual proper, owing to the nature of its contents, has to be revised at frequent intervals and as no change is necessary in the tables it was considered advisable to publish them separately as a supplement. This has been done and the supplement in a convenient form has been issued to all Dominion land surveyors and to a few others closely connected with those surveys. It will not be necessary to publish the tables in future editions of the Manual proper.

The construction and use of the tables are fully explained in the supplement and are further elucidated by means of problems connected with the system of survey.

MANUAL OF SURVEY.

Some important changes have been made, since the issue of the sixth edition of the Manual in 1905, in the methods of survey and in the rates of remuneration for surveyors under daily pay. A booklet of amendments was issued in 1906 and a circular making a few further amendments was issued in 1908. The sixth edition of the Manual being almost exhausted, it is necessary to prepare another revision. Amendments and improvements have been introduced where necessary and the manuscript is now almost complete. It is expected that the new edition will be ready for distribution during the coming season.

THE BOUNDARY BETWEEN THE PROVINCE OF BRITISH COLUMBIA AND YUKON TERRITORY
FROM TESLIN LAKE TO TATSHENSHINI RIVER.

The boundary between the province of British Columbia and Yukon Territory is defined by the Imperial British Columbia Act of 1866 (29 and 30 Victoria, Chapter 67) as being the sixtieth parallel of north latitude. For other boundaries of the same kind and particularly in marking the forty-ninth parallel between Canada and United States it was agreed that the term, 'parallel of latitude,' means a line passing through all points of the same astronomical latitude, and having between any two adjoining observed latitudes the curvature of the theoretic parallel.

In the year 1898, with the development of the country adjoining the boundary, questions of jurisdiction between the province and the Dominion arose and a demarcation of the boundary became imperative. In November of that year the Provincial Secretary and Minister of Mines, Victoria, B.C., addressed a communication to the Minister of the Interior, calling attention to the necessity of defining the northerly boundary of British Columbia, more particularly of that portion of country situated between the Pacific coast and Teslin lake, and asking the co-operation of the Dominion Government in order to have this boundary line established. The Minister of the Interior directed that the work of defining the boundary should be proceeded with at once, and this was done without the assistance of the province. It is expected, however, that the Provincial Government will adopt the boundary as established by the Dominion officers.

The boundary has been surveyed from Teslin lake to the west crossing of Tatshenshini river, a distance of one hundred and sixty-five miles. Sixteen points on the boundary were established from astronomical observations for latitude on the sixtieth parallel and these points were joined in adjacent pairs by arcs having the curvature of the theoretic parallel; one hundred and fifty additional monuments were established thereon.

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From Teslin lake to Takhini river, eleven points were established by G. White-Fraser, D.T.S., in 1899 and 1900, by astronomical observations for latitude with a twelve-inch altazimuth instrument, with two micrometer microscopes reading to one second of arc. The probable error in latitude of any of these points is about twenty feet.

From Takhini river to Tatsshenshini river five points were established by J. N. Wallace, D.L.S., in 1907 and 1908, by astronomical observations for latitude with a Troughton and Sims zenith telescope, of twenty-eight-inch focal length, Talcott's method for observing latitude being employed. The probable error in latitude of any of these five points is from six to ten feet.

The intermediate monuments from Teslin lake to Takhini river were established by A. Saint Cyr, D.L.S., in 1899, 1900 and 1901; and those from Takhini river to Tatsshenshini river by J. N. Wallace, D.L.S., in 1907 and 1908.

The method employed in establishing the intermediate monuments between stations fixed by astronomical observations is as follows:—Each latitude station was joined to the next one by a line having the curvature of the theoretic parallel at sixty degrees of north latitude, by running, as a trial line, a series of tangents to the prime vertical circles passing through the initial latitude station, and the offsets to the sixtieth parallel were calculated according to the formula:

$$\text{Offset (to parallel from tangent)} = \frac{D^2 \sin \varphi}{2N \cos \varphi}$$

or \log of offset (in chains) $= 2 \log D + \log C$, where D is the distance in chains measured from the points of tangency of the trial line with the assumed, or theoretic parallel passing through the initial astronomical station, and C is a constant whose logarithm is 6.4352819 .

In closing on an astronomical station the residual offset due to difference in station error of the two latitude stations was distributed proportionately at all the monuments.

Linear measurements along the trial line were made by Mr. Saint Cyr with a Lugeol micrometer, and by Mr. Wallace by triangulation with chained bases.

The monuments consist of an iron post, three feet long and three-quarters of an inch in diameter, driven flush with the ground. This iron post defines the boundary. Its position is shown by a wooden post planted beside it, standing, as a rule, about four and one-half feet out of the ground, and surrounded by a circular cairn of stones, or an earth mound, about seven feet in diameter and four feet high. In some cases, owing to the nature of the ground or for other reasons, the iron post was omitted, and the wooden post defines the boundary. A complete description of each monument was recorded by the surveyor and is shown on the plan of the boundary.

Between monument 118 (station L) on Takhini river, and station T, on Hendon river, a distance of nine miles, no monuments were established, owing to the roughness of this part of the country, over which it was impracticable to run the boundary line.

The wooden posts are marked with the letters B. C. (signifying British Columbia) on the south side, and Y. (signifying Yukon) on the north side. The posts are not numbered on the ground, although a system of consecutive numbers has been adopted to designate the monuments, beginning with No. 1 at Teslin lake and ending with No. 166 at the west crossing of Tatsshenshini river. It is the intention to have them numbered on the ground according to this system in the near future.

The monuments have been established where the boundary intersects the most important lakes, rivers and valleys, such as Teslin lake, Narrows lake, Happy valley, Atlin lake, Taku arm, Windy arm, Bennett lake, Munroe lake, Partridge lake, Primrose river, Takhini river, Hendon river, Kusawa river, Blanchard river, and Tatsshenshini river, and also at intermediate points wherever practicable, the distance between the monuments averaging about one mile. In many places ranges of high mountains

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have been crossed, the highest point of the boundary line being on Mt. Nevin (elevation 7,259 feet).

A plan of the boundary between the province of British Columbia and Yukon Territory at a scale of one mile to an inch is published in connection with this report. The plan shows the boundary as surveyed from Teslin lake to Tatsshenshiqi river. The monuments are shown by square black marks and the nature of each monument indicated thus: I.P., W.P.M., signifying iron post together with a wooden post and mound. The monuments established by astronomical observations for latitude are distinguished by letters, in addition to their numbers. The distances between the monuments are shown in chains and decimals. The bearings of the lines joining adjacent monuments are shown to the nearest second, and are referred to the meridian passing through each monument. The topography is shown in the immediate vicinity of the boundary line. Elevations are shown in feet above sea level.

Detailed information regarding the several seasons' surveys, the nature of the country, climate and other miscellaneous data may be found in the reports of G. White-Fraser, D.T.S., and A. Saint Cyr, D.L.S. (Reports of the Department of the Interior, 1900, 1901, 1902), and the reports of J. N. Wallace, D.L.S., for 1907 and 1908 (Reports of the Topographical Surveys Branch, 1907-8 and 1908-9). A few of the photographs taken by the surveyors while working on the boundary accompany this report.

CORRESPONDENCE.

The correspondence consisted of :

Letters received..	10,592
Letters sent....	13,987

ACCOUNTS.

The accountant's record shows :

Number of accounts dealt with..	703
Amount of accounts..	\$892,231
Number of cheques forwarded..	3,622

OFFICE STAFF.

The office staff of the Topographical Surveys Branch at Ottawa consists of one hundred and sixty-eight employees. A list of the staff is given as appendix No. 10. There are at present seventeen vacancies, sixteen in the chief draughtsman's office and one in the geographer's office.

Many changes took place again during the past year in the personnel of the staff.

The following resigned from the staff of the chief draughtsman's office:—

Messrs. J. R. Akins, W. B. Bucknill, P. A. Carson, T. A. Davies, H. S. Day, F. H. Maynard, J. E. Morrier, A. G. Stewart, C. H. Taggart and M. B. Weekes. Messrs. A. S. Cram and C. H. Wilding were transferred to the Land Patents Branch, Messrs. G. A. Grey, J. B. Hutton and S. H. Shore to the Registration Branch and Mr. G. A. Gaudry to the Railway Lands Branch.

Messrs. G. B. Dodge, F. H. Kitto and D. F. Robertson were absent part of the time on surveys in the field.

The following new members were appointed:—Messrs. W. B. Bucknill, M. B. Bonnell, J. P. Cordukes, A. d'Orsomens, E. J. Ebbs, A. H. Flindt, A. M. Grant, K. D. Harris, J. B. Milliken, J. P. MacMillan, B. E. Norrish, H. Osmond, W. J. Peaker, S. H. Shore, R. S. Stronach and L. N. Wadlin. Mr. H. F. Hayward returned to the staff from the Timber, Grazing and Irrigation Branch where he had been working temporarily.

Mr. W. G. Addison was added to the correspondence staff and Miss M. F. Percival was transferred to the Registration Branch.

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Three new members were appointed to the staff of the geographer's office, viz., Messrs. E. D. Bryant and Thos. Grindlay and Miss M. Stewart. Mr. C. G. Wood died; he had been attached to the staff for five years.

Mr. E. E. Bryce was transferred from the Land Patents Branch to the survey records office. Mr. Mudie of this office resigned.

Mr. H. N. Topley of the photographic office has been transferred.

Messrs. E. B. Burnett and P. Kane were appointed to the lithographic office. Mr. H. G. Grant was employed temporarily for three months during the year.

CHIEF DRAUGHTSMAN'S OFFICE.

(*P. B. Symes.*)

The changes made by the Civil Service Amendment Act of last year have affected this office to a very great extent. For twenty-five years previous to September 1 last all the draughtsmen had been 'temporary employees' with the single exception of the chief draughtsman, although a number of them spent many years in the office. Many, however, remained a very short time and changes were so frequent that it was a continual problem how to arrange the work to the best advantage. The staff being now included in the permanent organization of the service and their remuneration being adequate it is anticipated that changes will in future be few, and this will no doubt tend towards securing a more competent staff, experience in the office itself being of great importance in a branch like this, where the business differs considerably from that in any other office.

The greater permanence of the staff has already shown results in increased efficiency, the routine of the office running more smoothly and more work being turned out without any increase in the number of draughtsmen which is the same as a year ago. This does not mean that we have sufficient help for keeping up with our requirements; in fact we need a considerable increase, being at present sixteen short of the number estimated as necessary and authorized by Order in Council. We are doing the most pressing work but there is much that ought to be done.

The tendency noted in the last report to occupy much of the time of the draughtsmen in correspondence still continues, about six thousand five hundred letters having been drafted in this part of the branch during the year.

The assistant chief draughtsman superintends the preparation of the instructions for surveyors as to the field work allotted to them and this occupies a large part of his time. The instructions vary with every case and often involve a considerable amount of study and research to provide the necessary information to arrange that the work needed in a certain locality shall be done if possible while a surveyor is in the neighbourhood and to avoid overlapping in the distribution of the field work. On the whole, our system seems to be successful; it is very seldom that any misunderstanding arises with reference to the instructions and very seldom that any surveyor has to complain of any incompleteness or mistake in getting them out.

Reports below from the heads of the different divisions give details as to operations carried on in each in the last twelve months.

DRAUGHTING OFFICE—FIRST DIVISION—INSTRUCTIONS AND GENERAL INFORMATION.

(*T. E. Brown.*)

Owing to the augmentation of the work in this division the staff has been increased from nineteen to twenty-one employees.

Two employees are engaged in preparing instructions to the surveyors in charge of parties in the field. Instructions were drafted for one hundred and twenty-four survey parties. Before instructions for any particular survey can be intelligently

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compiled, it is necessary to collect all available information as to Dominion land, Indian reserve or other surveys already made in the vicinity; this takes the time of five employees. Nineteen hundred and one sketches and 334 maps and tracings were made to accompany the instructions.

The various office registers, in which a record is kept of the surveys performed each year by each surveyor, and of the progress of each surveyor's work in the field take the whole time of two men. It is very important that these records be carefully and accurately kept, as a slight error might entail difficulties and serious losses to the surveyors as well as errors in the township and other plans compiled in the office. Thirteen hundred and eight progress sketches were received from surveyors in the field, also 673 books of field notes of township surveys, 77 books and 503 plans of miscellaneous surveys, 276 timber reports, 436 statutory declarations of settlers and 11 sheets of observations for magnetic declination. Returns of the surveys of 300 separate blocks of timber berths were also received.

After complete examination 615 books of field notes were placed on record, together with 429 notes and plans of miscellaneous surveys and 436 statutory declarations.

Plans of 609 townships and 14 settlements or townsites, and 48 sectional maps were received from the lithographic office, posted in the registers and distributed.

Preliminary plans were issued for 416 townships, four copies of each being furnished. Two members of the staff are occupied a considerable part of the time in preparing these plans; the remainder of their time is devoted to preparing sketches for instructions.

One employee deals with communications from settlers and others on miscellaneous subjects, answers inquiries from other branches of the Department and prepares descriptions of parcels of land for the purpose of transfers and patents. The number of communications in this connection was 1,270, involving the preparation of 329 sketches, 38 maps and tracings and 463 pages of copies of field notes.

A set of sectional maps on a scale of three miles to the inch is being prepared, showing the closings of township surveys. These maps illustrate in a convenient form all discrepancies in the surveys and enable the officials when drafting instructions to point out to the surveyors irregularities they may expect to find in the surveys on the ground. Two employees have been engaged the whole year on these maps, twenty-three of which have been completed.

A general report of survey operations from 1869 to 1889 was published in the annual report of the Department of the Interior for 1891. Two members of the staff are now working on a similar report embracing operations up to the present time. The need of such data for reference has been felt for a long time, but, owing to the pressure of other work, its compilation has been deferred from year to year. It is hoped to have it ready for publication in the next annual report of this branch.

It is expected that there will be ready for publication in the same report a short history of photo-topographical survey operations in the Rocky mountains from their inception up to the present. Two other members of this division have this work now in hand. There is at present no comprehensive description of these operations, hence it is expected that this compilation will prove a valuable aid in the office as a reference, and will be of value to persons interested in photographic surveying.

Considerable work is involved in the collection of data for the annual reports of the Branch. Descriptions of the townships surveyed have to be compiled from the field notes. The reports of the surveyors on their operations for the season have to be examined and put in shape for publication. The employee who is editing the annual report devotes the whole of his time to it.

The storage vault for the branch is in charge of another member of the first division. The work of keeping in order the thousands of documents stored there keeps him busily occupied most of the time. In addition, he attends to the distribution of stationery, drawing instruments, &c., to the officials of the Branch.

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The Manual of Instructions for the Survey of Dominion Lands was revised in this division. This revision has already been mentioned. The Supplement to the Manual of Surveys was also prepared and proofread in this division.

Four thousand and ninety draft letters and memoranda were written during the year.

DRAUGHTING OFFICE—SECOND DIVISION—EXAMINATION OF SURVEYORS' RETURNS.

(*T. S. Nash.*)

In this division all returns of surveys of Dominion lands in the provinces of Manitoba, Saskatchewan and Alberta are examined and the plans of the surveys are compiled. The reports of the inspectors of contract surveys are examined; the contractors are notified of any discrepancies and they are given the opportunity to make the necessary corrections on the ground. These reports are used in finally accepting the work and in making up the accounts for surveys performed under contract.

The progress sketches which show the progress of the work in the field and upon which advances to the contractors are made are examined to see that all the work closes within the limits required by the Manual and that all areas made fractional by water are shown. During the past year, 1,166 of these sketches were examined including 360 sketches from inspectors.

Upon being received the final returns are first given a cursory examination, the purpose of which is to detect any serious omissions or discrepancies and if necessary, they are returned to the surveyor for correction. After this the returns of all previous surveys in the township, townsite, or settlement are collected and the compiling of the plan is proceeded with. During the year, 478 subdivision surveys, 370 outline surveys, and 63 miscellaneous surveys were examined and the compiled plans of 591 townships were sent to the draughtsmen. This number included first edition plans of 331 townships which shows the rapid rate at which the country is being opened up. Compiled plans of 13 miscellaneous surveys were also sent to be drafted. While the compiling is being carried on a very careful examination is made of the returns of the new survey and a memorandum of any discrepancies or omissions is sent to the surveyor. During the year 525 such memoranda were sent, 486 answers to memoranda were received and the necessary corrections made in the returns, and 1,240 letters in connection with the work were drafted.

This division also examined plans of 280 road diversions made by the provincial governments of Saskatchewan and Alberta, 76 plans of right-of-way of railways, and plans of survey of 74 timber berths.

DRAUGHTING OFFICE—THIRD DIVISION—DRAWING FOR REPRODUCTION.

(*C. Engler.*)

The staff of this division is smaller than for two or three years past. The nominal strength is thirteen since September 1 last when the employees were admitted into the service on a permanent footing, as compared with fourteen a year ago, and fifteen the year previous. Since September 1, however, one has been permanently transferred and two temporarily employed in another Branch of the Department, one for over a month, the other for nearly three months; at the time of writing the latter is still there. It is needless to add that under these circumstances it is somewhat difficult to keep up with the work of the division.

Owing to the increased demand for space in the building at the corner of Metcalfe and Slater streets it was deemed advisable to move one of the divisions to the Imperial building on Queen street. As the work of this division is for the most part that of preparing plans for printing and consequently does not involve frequent reference to original plans, field notes and files of correspondence, it was thought that this division

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could be best separated from the others and it was accordingly moved to its present quarters. They are large and well lighted, facts which offset to some extent the disadvantage of being at a distance from the Metcalfe street building.

As said above, the principal work of the division consists in preparing plans for printing. These plans are compiled in the second and fourth divisions. In their compilation the main object is accuracy as to data; no special effort is made to form well made figures or letters, in fact the data are usually put on the plans in ordinary handwriting. In the third division these plans are copied, care being taken to make a neat, well arranged plan with all letters and figures carefully made. At present almost all the letters and figures are stamped on the plans in type, thus securing uniformity.

In 1906 a Pilot printing press 6 x 10½ inches inside chase measurement was purchased in order to print titles, footnotes, &c. When the use of a printing press was first suggested for this work it was feared that it might not prove satisfactory; so in order not to have too large an outlay on what seemed a somewhat doubtful venture, the smallest and least expensive press was purchased. Two years' trial proved the press to be very useful and the results fully justified the expenditure, but it has been found to be scarcely large enough for some of the work required. The small press was therefore returned to the makers in part payment for a larger and better one 10 x 15 inches inside chase measurement. An expert printer is in charge; he also looks after all the type, ink, &c., used in connection with stamping plans. He has been kept so busy of late that a 'printer's devil' will doubtless be his next requirement.

Another improvement in the office equipment consists in a larger and better tracing frame. It may be explained that a tracing frame is simply a device to enable the draughtsman to trace out on a blank sheet of paper any plan or drawing to be copied. The credit of designing the new tracing frame belongs largely to Mr. J. E. May. In the frame formerly in use sunlight was reflected so as to pass through the plan and make the lines visible to the draughtsman. There were two objections to this; the frame could not be used to advantage when the day was dark and clouded, and it had to be placed near a window in the best light which, of course, left less good light for the ordinary work of the draughtsmen. The present frame is lighted by a series of six electric lights placed below a sheet of plate glass. Provision is made for ventilating the space around these lights so as not to heat the glass. A hood of black cloth shuts out all light from the room and renders the artificial light more effective. Two slits along the edges of the frame make it possible to trace the largest plan by simply sliding the plan through them and rolling it up as it is traced.

During the year, 612 plans of townships have been prepared for printing, together with 167 plans and drawings of a miscellaneous nature. As indicated in the annual report of 1908 the miscellaneous plans and drawings are of great variety. A mere statement of their number gives no idea of the amount of work involved in their production.

With a view to ascertaining the cost of publication of township plans a statement of the actual time spent in preparing each township plan has been kept. This practice has been followed for about five years. Occasionally the cost of publishing plans of other descriptions has been called for and therefore a statement is now being kept of the time spent in preparing all plans and drawings.

draughting office—FOURTH DIVISION—BRITISH COLUMBIA SURVEYS.

(E. L. Rowan-Legg.)

The staff of this division has been engaged in the examination of the returns of subdivision surveys, of mineral claims, of railway rights-of-way and of timber berths in the railway belt. Township and townsite plans for the British Columbia surveys are compiled and the fair copies of such plans for reproduction by photo-zincography

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are compared. Instructions for surveys, together with sketches and other information for the use of surveyors in the field are prepared. Replies are made to requests for information, which frequently involves the preparation of sketches and long searches for data. Preliminary plans, which allow of lands being opened for entry previous to the issue of the official plan, are prepared for lands subdivided in the railway belt.

A large number of the returns of survey of timber berths in the railway belt were examined. The work of this division has been greatly increased, not only by the examination of these returns, which heretofore was made in another branch of this Department, but also by the drafting of letters and memoranda in connection therewith.

Discrepancies having been discovered in some of the old surveys in the vicinity of Kamloops lake, the compiling of the plans of several townships, which were urgently needed, could not be proceeded with until check surveys had been made to locate the cause of the discrepancies. As soon as possible, after the completion of these surveys, the plans were compiled and copies issued.

A resurvey of the townsite of Hope was made by Mr. A. W. Johnson, D.L.S., in 1906, and a plan of the same was then commenced in this office, but could not be completed because it was found that some further surveys and corrections would be required. These were made by Mr. Johnson last year, and the plan was finished and copies were issued in January of this year.

On account of the rough character of the country in the railway belt a survey of the whole of any township is not proceeded with at one time, but section, or quarter section lines are surveyed to govern lands for which there are, or may be applications. All additional surveys which have been made since the issue of the first edition of the township plan are added to the original compiled plan, and copies are issued as a second, third or fourth edition corrected as the case may be.

The work of compiling plans of townships in the railway belt has been much complicated by having to show on them the lands which were disposed of by the Provincial Government, and which, therefore, did not form part of those transferred to the Dominion. As the boundaries of these lands do not coincide with section lines of the Dominion lands system of survey they have to be accurately plotted on the plan so as to allow of the areas of fractional legal subdivisions of adjoining Dominion lands being shown. This adds greatly to the time spent in the work of compiling.

DRAUGHTING OFFICE—FIFTH DIVISION—MAPPING.

(*J. Smith.*)

The principal occupation of the fifth division is the interminable work of keeping the sectional maps up to date. These maps cover the surveyed area of the fertile belt of the northwest provinces from Lake of the Woods to the Rocky mountains and also the railway belt in British Columbia. Each sheet covers eight townships from south to north and an average of fourteen townships from east to west, thus comprising about one hundred and twelve townships or a little over four thousand square miles or two million five hundred and sixty thousand acres.

Up to the present time seventy-six sheets have been published and the number will be increased as the surveys are extended. No new sheets have been published during the past year but forty-six have been revised, thirty-four of these have been reprinted and the remainder are in the printers' hands and will be issued before long. Apart from the actual drawing and tracing of the sectional maps, a very considerable part of the work is the obtaining of the information required in revising. During the past year eight hundred and fifty-three plans of surveyed trails were obtained from the record office and examined for information, one hundred and fifty-five field books of township and other surveys were also obtained from the record office and used in compiling, besides two hundred and sixty-eight field books which had not yet been placed

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on record. The positions of four hundred and twenty-seven post-offices were ascertained through the Post Office Department, and a large amount of information about new railways and other items had to be collected.

In connection with the Yukon surveys the number of returns received is more than double that of last year, and a more rigid scrutiny of the surveyors' returns has caused a great increase in the correspondence and in the office work generally.

The miscellaneous drawings made by the fifth division consist of a plan of the mouth of Klondike and Bonanza rivers showing the complication of surveys at that point, a small plan of a ford across the Athabaska river, a copy of W. Thibaudeau's plans and profiles of water-powers on the Winnipeg river, a plan of the electoral districts of Yukon Territory, plans of the first system of surveys near Prince Albert and the fifth system near Port Moody, a map of the boundary between the province of British Columbia and Yukon Territory from Teslin lake to Tatsbenshini river, and a plan defining the foot of the eastern slope of the Rocky mountains from the international boundary to Peace river. The search for definite information on this last subject and a report thereon entailed the examination of one hundred and five field books besides a large amount of other literature.

One draughtsman resigned his position since the last report but two others were appointed to the staff which now numbers eleven.

draughting office—SIXTH DIVISION—SCIENTIFIC AND TOPOGRAPHICAL WORK.

(G. Blanchard Dodge.)

This division was formed during the year and is to consist of thirteen employees. The duties of the division will be the control and supervision of the scientific and topographical part of the surveys.

Almost from the inception of the surveys it has been realized that valuable topographical and scientific information could easily be obtained at a small extra cost by the surveyors who are subdividing Dominion lands. A few attempts were made to collect such information but from motives of economy they were soon discontinued, the work of the surveyors being strictly limited to what was necessary for the purposes of settlement. The value of such information being now better appreciated by the public, the surveys are being made somewhat more elaborate.

As a beginning, surveyors of base lines are now taking levels along the lines. These will be ultimately connected and will form the basis for maps showing the relief of the country. A knowledge of this relief is of the utmost importance in questions of irrigation or drainage, construction of roads, railways or canals, for the classification of agricultural lands and many other purposes.

The field notes of the surveyors contain much topographical information which has never been plotted because the office staff was insufficient; this work will now be taken up and put in shape for publication.

Although the lines of the Dominion Lands System of survey are established upon astronomical bearings, the compass is very useful in exploratory surveys and for work of a like character. Considerable information is gathered by surveyors regarding the declination, inclination and intensity, but the observations have to be co-ordinated and properly recorded. Improvements in the instruments supplied to surveyors will greatly add to the value of the observations.

The preparation of the astronomical field tables and diagrams and the calculations incidental to the business of the topographical surveys have now assumed such proportions that a special staff of mathematical experts has become a necessity. Work of this character will all be done in this division.

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SURVEY RECORDS OFFICE.

(C. J. Steers.)

The rapid increase in the routine work of the office has made it very difficult to get the time needed for readjustment of indexes and general supervision. During the months of the year when work was not so pressing some progress was made on the new loose leaf indexes. The portions being entered first are those which experience has shown most required adjustment.

A new index for field notes of township surveys has also been started and is being worked at as time is available. This index is made necessary as the old one is very congested owing to the smallness of its scale and the increasing numbers of field books affecting many of the townships.

A large portion of one man's time has been taken up supplying information for the sub-agents, chiefly in preparing for them skeleton maps of sub-agencies on a large scale showing the lands disposed of.

The increase in the number of printed and preliminary plans has been so great that it has been found necessary to divide up the work of sending them out; one person now attends to the printed plans and letters, while another has charge of the preliminary plans and letters accompanying them.

A list is now kept of plans asked for which are out of print, so that these plans may be sent to the parties desiring them as soon as the reprints are received.

PHOTOGRAPHIC OFFICE—(*Process Work*).*(H. K. Carruthers.)*

After the clean copy of a plan has been completed it is handed over to the process photographer for reproduction. The plan is photographed on a wet plate and then printed on a zinc plate. From the zinc, the plan is transferred either to stone or to another zinc plate, according as it is to be printed on the flat bed or rotary offset press.

A new copying camera has been installed; it takes plates from 4 x 5 inches to 24 x 34 inches, while the largest size with the old camera was 17 x 20 inches. A great advantage of the new camera is that it is provided with very complete means of adjustment; this will improve, not only the quality of the work but its accuracy.

Corrections to plans have hitherto been made mostly on the lithographic stones or zinc plates; they are now being made as much as possible on the negatives, before printing on zinc. It is found that the corrections are not only more easily made on the negatives, but the work is also finer. The only extra trouble is the striking of a proof from the negative on blue print paper.

The number of negatives made was about 200 in excess of last year.

PHOTOGRAPHIC OFFICE—(*General Work*).*(John Woodruff.)*

During dark days in winter some difficulty has been experienced in handling the large number of silver prints which we were called upon to furnish. To expedite printing, an aristo-electric lamp and cabinet have been procured. The cabinet is revolving; it holds forty 5 x 7-inch frames and twelve 11 x 14-inch frames. In the centre is a powerful arc lamp. The apparatus is a great convenience and there is no longer any delay in printing.

A dry mounting press has been purchased. With it photographs can be mounted on the thinnest mounts without curling. The improvement is particularly manifest in the case of large photographs.

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A considerable part of the chief photographer's time is taken by the work of the Immigration Branch. In this connection, he made two trips during the summer, one to the Niagara district for photographing farms and orchards, and one to the Ontario oil fields for photographing oil wells and plants. He secured a large collection of fine views. He also attended the Tercentenary celebration at Quebec and secured views of the most interesting events.

LITHOGRAPHIC OFFICE.

(A. Moody.)

The rotary offset press mentioned in the annual report for 1907-8 has been installed and is now in operation. It has given some trouble, but it is expected that all the difficulties will soon be overcome and that it will be turning out fine work. It is a fast press and particularly useful in printing large editions.

The machine for graining zinc plates set up at the same time as the rotary press is proving quite satisfactory. By using zinc instead of lithographic stones, plans or maps can be kept on the plates for new issues, the plates being easily stored away. If the plans or maps were on stone, they would have to be cleared away after printing.

A lithographic artist has been added to the staff; when not engaged in preparing lithographic stones or plates, he helps in spotting and making corrections on negatives.

Part of the plant is in the building at the corner of Metcalfe and Slater streets, the other part being in the Imperial building. This division is very inconvenient; moreover, the places are too small and too crowded for working to advantage.

GEOGRAPHIC BOARD.

(A. H. Whitcher.)

The seventh report of the Geographic Board of Canada, being a consolidation of the decisions published in previous reports and bulletins to June 30, 1908, was published and distributed. In addition to the large number issued in 'blue-book' form with other sessional papers of the Government, the Board receives 800 copies which are sent to Dominion and Provincial officials, colleges, school inspectors and libraries, also to geographical societies and map publishers in Canada and elsewhere, and the bulletins containing the decisions published in the *Canada Gazette* are distributed from time to time in like manner.

The regular monthly meetings of the Board have been well attended and special meetings have been held during the year.

Mr. Whitcher, who is a member of the Board and its secretary, has also continued the special work assigned to him as a member of the staff of the Topographical Surveys Branch.

BOARD OF EXAMINERS FOR DOMINION LAND SURVEYORS.

(F. D. Henderson.)

Three meetings of the Board of Examiners were held during the year. The first was a special meeting lasting from May 2 to May 28, 1908, during which examinations were held at Ottawa, Toronto and Calgary. The second one was a special meeting held on July 28, 1908. The third one was the regular annual meeting which began on the second Monday in February, 1909 (February 8), as provided by the Dominion Lands Surveys Act, section 9, and lasted until March 26, 1909. During this meeting examinations were held at Ottawa, Halifax, Toronto, Winnipeg, Calgary, Edmonton and Vancouver.

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At the two examinations (May, 1908, and February, 1909), eighty-eight candidates passed the preliminary examination, thus becoming eligible to serve as articulated pupils, twenty-seven candidates passed the final examination for commission as Dominion land surveyor, and one candidate passed the examination for certificate as Dominion topographical surveyor. The names of the successful candidates are as follows :—

PRELIMINARY EXAMINATION.

Barnes, F. M., St. John, N.B.
Banting, E. W., Toronto, Ont.
Beale, A. M., Ottawa, Ont.
Bennett, G. A., Eden, Ont.
Beresford, H. E., Grandview, Man.
Berry, E. W., Seaforth, Ont.
Bidouze, P., Edmonton, Alberta.
Blanchet, G. H., Ottawa, Ont.
Boulton, W. J., Wallaceburg, Ont.
Bowman, H. D., London, Ont.
Brown, E. C., Grenfell, Sask.
Buchanan, J. A., Comber, Ont.
Calder, J. A., Ashcroft, B.C.
Cameron, A., Ottawa, Ont.
Cannell, H. W., Ottawa, Ont.
Casey, J. M., Ottawa, Ont.
Churchill, H. W., Westport, N.S.
Cline, C. G., East Aurora, N.Y.
Colter, A. A., Keswick, N.B.
Dann, E. M., London, Ont.
Dawson, F. J. Truro, N.S.
de la Condamine, C., High River, Alta.
Donnelly, C., Winnipeg, Man.
Duff, M. O'R., Hamilton, Ont.
Elder, P. M., Ottawa, Ont.
Evans, S. L., Corinth, Ont.
Ewart, D. M., Ottawa, Ont.
Fletcher, J. A., Fletcher, Ont.
Glover, A. E., Beaverton, Ont.
Graham, D. A., Toronto, Ont.
Gray, J. E., Uxbridge, Ont.
Hamilton, C. T. Fort William, Ont.
Harvey, D. W., London, Ont.
Higgins, C. J., Vancouver, B.C.
Hobbs, W. E., Winnipeg, Man.
Huffman, K., Toronto, Ont.
Jackson, W., Toronto, Ont.
Johnson, R. H., Toronto, Ont.
Johnston, H. F., Toronto, Ont.
Jost, L. G., Guysborough, N.S.
Lloyd, N. C. A., Schomberg, Ont.
Loucks, R. W. E., Delisle, Sask.
Macdonald, G. A., Muirkirk, Ont.
Manny, D. E., Beauharnois, P.Q.
Martindale, E. S., Kingsmill, Ont.
Martin, W. H., St. Thomas, Ont.

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Martyn, O. W., Mitchell, Ont.
 Meader, C. H., Toronto, Ont.
 Mitchell, A. B., Toronto, Ont.
 Munro, F. V., Chatham, Ont.
 Murdock, C. R., Toronto, Ont.
 McCusker, K. F., St. Louis de Gonzague, P.Q.
 McGarry, P. J., Merriton, Ont.
 McKenzie, M., Lake Megantic, P.Q.
 McLean, D. L., Ottawa, Ont.
 McMaster, W. A. A., Palmerston, Ont.
 McRoberts, A. A., Pontypool, Ont.
 Narraway, A. N., Ottawa, Ont.
 Neelands, R., Hamiota, Man.
 Neville, E. A., Toronto, Ont.
 Patterson, E. B., Toronto, Ont.
 Peckover, H. J., Toronto, Ont.
 Peters, F. H., Ottawa, Ont.
 Pounder, J. A., Toronto, Ont.
 Purser, R. C., Windsor, Ont.
 Ransom, J. T., Toronto, Ont.
 Redfern, C. R., Toronto, Ont.
 Ritson, C. W., Edmonton, Alberta.
 Robertson, E. D., Ottawa, Ont.
 Robinson, W. A., Winnipeg, Man.
 Roe, B. J., Ottawa, Ont.
 Seibert, F. V., Southampton, Ont.
 Sharpe, G. P., Agassiz, B.C.
 Soars, N., Edmonton, Alberta.
 Stewart, N. C., Nelson, B.C.
 Stirrett, G. P., Petrolia, Ont.
 Tate, H. W., Wimbeldon, Eng.
 Tremblay, A. J., Edmonton, Alberta.
 Theriault, L. L., Fredericton, N.B.
 Underwood, J. A., Lakelet, Ont.
 Van Skiver, L. A., Fish Lake, Ont.
 Walcott, W. H., Montreal, P.Q.
 Walker, C. M., Guelph, Ont.
 Warren, J. S., Strathcona, Alberta.
 Waugh, B. W., Chicago, Ill.
 Wilson, W. S., Sault Ste. Marie, Ont.
 Wing, D. O., Berlin, Ont.

FINAL EXAMINATION.

Ashton, A. W., Ottawa, Ont.
 Baker, M. H., St. Thomas, Ont.
 Campbell, A. J., Toronto, Ont.
 Campbell, A. S., Kingston, Ont.
 Chilver, H. L., Walkerville, Ont.
 Christie, U. W., Ottawa, Ont.
 Clunn, T. H. G., Ottawa, Ont.
 Cochrane, M. F., Ottawa, Ont.
 Cumming, A. L., Ottawa, Ont.
 Cummings, A., Fernie, B.C.

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Dennis, E. M., Ottawa, Ont.
Dodge, G. B., Ottawa, Ont.
Johnson, P. N., Edmonton, Alberta.
Lang, J. L., Toronto, Ont.
McCallum, G. H., Ottawa, Ont.
McCaw, R. D., Welland, Ont.
McFarlane, J. B., Toronto, Ont.
Rannie, J. L., Ottawa, Ont.
Rice, F. W., Ottawa, Ont.
Rolfson, O., Walkerville, Ont.
Scott, W. A., Galt, Ont.
Summers, G. F., Winchester, Ont.
Sykes, F. H., Toronto, Ont.
Tremblay, A., Quebec, P.Q.
Westland, C. R., Ottawa, Ont.
Williams, G. L., Vancouver, B.C.
Wilson, N. D., Toronto, Ont.

D. T. S. EXAMINATION.

McColl, G. B., Winnipeg, Man.

Oaths of office and allegiance and bonds for the sum of one thousand dollars each, as required by section 25 of the Dominion Lands Surveys Act, were received from twenty-five candidates who had previously passed the examination for commission as Dominion land surveyor.

Twenty-three commissions as Dominion land surveyors were issued, as follows:—

Ashton, A. W., Ottawa, Ont.
Baker, M. H., St. Thomas, Ont.
Campbell, A. S., Kingston, Ont.
Christie, U. W., Chesley, Ont.
Clunn, T. H. G., Ottawa, Ont.
Cochrane, M. F., Ottawa, Ont.
Dodge, G. B., Ottawa, Ont.
Lang, J. L., Toronto, Ont.
McAuslan, H. J., Euphrasia, Ont.
McCaw, R. B., Welland, Ont.
McFarlane, J. B., Toronto, Ont.
Mitchell, B. F., Hamilton, Ont.
Rannie, J. L., Ottawa, Ont.
Rinfret, C., St. Stanislas, P.Q.
Robinson, E. W. P., Victoria, B.C.
Rolfson, O., Walkerville, Ont.
Scott, W. A., Galt, Ont.
Soars, H. M. R., Edmonton, Alberta.
Steele, I. J., Ottawa, Ont.
Stewart, A. S., Edmonton, Alberta.
Sykes, F. H., Toronto, Ont.
Williams, G. L., Vancouver, B.C.
Wilson, N. D., Toronto, Ont.

A certificate as Dominion topographical surveyor was issued to G. B. McColl, D.L.S., Winnipeg, Manitoba.

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Every Dominion land surveyor is required to have in his possession a subsidiary standard of length (D.L.S. Act, section 35). Eighteen such standards were issued by the Secretary, and one surveyor reported that he had secured a standard from the estate of a deceased surveyor. A list of surveyors who have been furnished with standard measures up to March 31, 1909, will be found in Appendix No. 11.

The correspondence of the Board was as follows:—

Letters received	1,717
Letters sent	1,196

Circular letters, pamphlets and parcels sent, 600 (approx).

The questions put at the examination in February, 1909, are submitted as Appendix No. 12.

At the special meeting in May, 1908, 62 candidates presented themselves for the full preliminary examination, 15 for the limited, 18 for the final, and 1 for the examination for certificate as Dominion topographical surveyor. The affidavits and certificates of the final candidates were examined and the answers of all the candidates were read.

The meeting of July 28 dealt with a communication to the Board relative to a survey in the Yukon Territory.

At the regular meeting in February, 1909, 126 candidates presented themselves for the full preliminary examination, 21 for the limited preliminary, 34 for the final, and 2 for the D.T.S. The affidavits and certificates of the final candidates were examined and the answers to the examination papers were read. Several communications were dealt with, and it was decided that when a surveyor obtains a standard measure from any one except the Secretary, he shall at once submit it to the Secretary to be tested.

Applications having been received from several candidates for an examination in May, the necessary question papers were prepared before adjournment.

The number of candidates examined during the year was 279 as compared with 161 during the previous year.

Mr. F. D. Henderson is the Secretary of the Board.

APPENDICES.

The following schedules and statements are appended:—

No. 1. Schedule of surveyors employed and work executed by them from April 1, 1908 to March 31, 1909.

No. 2. Schedule showing for each surveyor employed from April 1, 1908, to March 31, 1909, the number of miles surveyed, of township section lines, township outlines, traverses of lakes and rivers and resurvey; also the cost of the same.

No. 3. List of lots in the Yukon Territory, surveys of which have been received from April 1, 1908, to March 31, 1909.

No. 4. List of miscellaneous surveys in the Yukon Territory returns of which have been received from April 1, 1908, to March 31, 1909.

No. 5. Statement of work executed in the office of the chief draughtsman.

No. 6. List of new editions of sectional maps issued from April 1, 1908, to March 31, 1909.

No. 7. Statement of work executed in the survey records office from April 1, 1908, to March 31, 1909.

No. 8. Statement of work executed in the photographic office from April 1, 1908, to March 31, 1909.

No. 9. Statement of work executed in the lithographic office from April 1, 1908, to March 31, 1909.

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No. 10. List of employecs of the Topographical Surveys Branch at Ottawa giving the name, classification, duties of office and salary of each.

No. 11. List of Dominion land surveyors who have been supplied with standard measures.

No. 12. Examination papers of the board of examiners for Dominion land surveyors.

Nos. 13 to 50. Reports of surveyors employed.

No. 51. Descriptions of surveyed townships submitted by Dominion land surveyors from April 1, 1908, to March 31, 1909.

NOTE.—Appendices Nos. 12 to 51 appear in the report of the Topographical Surveys Branch in monograph form.

MAPS.

The following maps accompany this report :—

Map showing surveys and resurveys made from April 1, 1908, to March 31, 1909.

Map of the boundary between British Columbia and Yukon Territory.

Maps accompanying reports of surveyors.

NOTE.—The above maps accompany the report of the Topographical Surveys Branch in monograph form.

I have the honour to be, Sir,

Your obedient servant,

E. DEVILLE,

Surveyor General.

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TOPOGRAPHICAL SURVEYS BRANCH.

SCHEDULES AND STATEMENTS.

APPENDIX No. 1.

SCHEDULE of Surveyors employed and work executed by them, from April 1, 1908, to March 31, 1909.

Surveyor.	Address.	Description of Work.
Aylsworth, C. F..	Madoc, Ont..	Partial subdivision of township 22, range 4; retracement and restoration survey of townships 16, range 1, and 11, range 7; partial retracement and restoration of townships 12, range 5, 16, range 7, and 17, range 8; all east of the principal meridian. Retracement and restoration survey of township 18, range 3, west of the principal meridian.
Baker, J. C...	Vermilion, Alta..	Contract No. 7 of 1908; subdivision of townships 53, 55, and 56, range 14, townships 52, 55, and 55, range 15, and townships 52, ranges 16 and 17; the northerly one-third of townships 54, ranges 14 and 15, and the southerly one-third of township 53, range 16, also the east outline of township 56, range 16; all west of the fifth meridian.
Beatty, David..	Parry Sound, Ont..	Survey of the east and south boundaries of Porcupine forest reserve in townships 39, ranges 29, 30, 31 and 32, township 40, range 28, and township 41, range 27 west of the principal meridian.
Belanger, P. R. A..	Ottawa, Ont..	Completion of inspection of contract No. 27 of 1906; inspection of contracts Nos. 14, 26, 30 and 32 of 1907, and partial inspection of contracts Nos. 17 and 29 of 1908; traverse of Winnipeg river in townships 13 and 14, ranges 12 and 13, and in townships 15 and 16, ranges 14 and 15; traverse of Pinawa channel in township 14, range 12; traverse of islands and lakes and verification surveys in townships 15, ranges 14 and 15; all east of the principal meridian.
Bingham, E. R...	Fort William, Ont..	Survey of a parcel of land between Blocks A and B of The Pas Indian reserve and extending southerly a distance of one mile from the Saskatchewan river.
Bolton, Lewis...	Listowel, Ont..	Contract No. 2 of 1908; subdivision of townships 31 and 32, ranges 14, 15 and 16, and townships 28, 29, 30, 31 and 32, range 17; all west of the fourth meridian.
Bourgault, C. E...	St. Jean Port Joli, P.Q.	Retracement and correction surveys in townships 11, 19 and 20, range 2; 9 and 30, range 3; 9, range 4; 21 and 22, range 5; 14, range 9; 17, 20 and 21, range 13; 20 and 21, range 14; 16, range 15, and 29, range 17; survey of Loukhobor village in township 31, range 3; retracement of township 20, range 4, and

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APPENDIX No. 1—*Continued.*

SCHEDULE of Surveyors employed, and work executed by them, from April 1, 1908, to March 31, 1909—*Continued.*

Surveyor.	Address.	Description of Work.
		partial retracement of townships 21 and 23, range 8; all west of the second meridian. Partial retracement of township 16, range 28, west of the principal meridian.
Bourgeault, A...	St. Jean Port Joli, P.Q.	Contract No. 5 of 1908; complete subdivision of townships 20, ranges 8 and 9, and partial subdivision of township 18, range 11; all east of the principal meridian.
Bray, Edgar...	Oakville, Ont...	Contract No. 6 of 1908; subdivision of township 38, range 2; partial subdivision of townships 38, ranges 1 and 3; the east outlines of townships 39 and 40, ranges 2 and 3, and traverse of lakes, in township 37, range 2; all west of the second meridian.
Carson, P. A...	Ottawa, Ont...	Triangulation surveys in British Columbia in connection with the Trigonometrical Section of the Topographical Survey of Canada. Subdivision and traverse in townships 26 and 27, range 26, west of the fifth meridian.
Cautley, R. H...	Edmonton, Alta...	Contract No. 13 of 1908; subdivision of townships 5 and 6, ranges 4, 5, 6 and 7; townships 7, 8 and 9, ranges 3, 4, 5 and 6; townships 10, ranges 3 and 6, and townships 6, ranges 2 and 3; all west of the third meridian.
Cautley, R. W...	Edmonton, Alta...	Contract No. 29 of 1908; completion of subdivision of townships 31, range 15, 32, range 18, and 34, range 19; subdivision of townships 31, range 16; 32, ranges 15, 16 and 17, 33, ranges 16, 17 and 18, 34, range 18, and 35, ranges 18, 19 and 20; partial resurvey of township 34, range 20; traverses in townships 30 and 31, range 17, and 33, range 19; survey of the east outlines of townships 36, ranges 20 and 21; all west of the principal meridian.
Christie, Wm. ...	Chesley, Ont...	Survey of portions of the seventh base across ranges 9 and 10; resurvey of the eighth base across ranges 11 and 12; resurvey of the ninth base across ranges 15, 16, 17 and parts of ranges 14 and 18; retracement of the ninth base across ranges 10, 11, 12, 13 and part of 14; survey of the east outlines of townships 29, 30 and part of 31, range 10, 31 and 32, range 16, and 33, 34, 35 and 36, range 17; all west of the principal meridian.
Coté, J. L...	Edmonton, Alta...	Contract No. 21 of 1908; subdivision of townships 64, ranges 19 and 20, township 66, range 18, and townships 67, ranges 16, 17, 19, 20, 21, 22 and 23; survey of the east outlines of townships 63, ranges 19 and 20, townships 65, 66 and 68, range 17, and of townships 65 and 68, range 18; all west of the fourth meridian.
Davies, T. A...	Ottawa, Ont...	Retracement of the fifth meridian from the north-east corner of section 24, township 4, to the third base; partial retracement of townships 5, 6, 7 and 8, range 1; partial subdivision of townships 8, 9, 10, 12 and 13, range 3, and of township 8, range 4; all west of the fifth meridian. Partial retracement of townships 5, 6, 7, 8 and 9, range 30, and township 9, range 29; all west of the fourth meridian.

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APPENDIX No. 1—Continued.

SCHEDULE of Surveyors employed, and work executed by them, from April 1, 1908, to March 31, 1909—Continued.

Surveyor.	Address.	Description of Work.
Deans, W. J.	Brandon, Man.	Part subdivision of townships 23, ranges 20 and 21, townships 29 and 30, range 23, township 26, range 24, and township 23, range 26; miscellaneous retracement and correction survey in townships 23, range 10, 22 and 23, range 11, 28, range 18, 30 and 31, range 21, 22, range 27, and 24, range 30, west of the principal meridian.
Driscoll, A. (See A. G. Stacey.)	Edmonton, Alta.	Contract No. 8, 1908; subdivision of townships 1 and 2, ranges 2, 3 and 4, townships 3, ranges, 7, 8 and 9, townships 4 and 5, ranges 2, 3, 7, 8 and 9; survey of the east outlines of townships 3, ranges 2, 3, 4 and 5; all west of the fourth meridian.
Dumais, P. T. C.	Hull, Quebec.	Contract No. 33 of 1907; subdivision of townships 27, 28 and 29, ranges 12 and 13, and township 30, range 13; all west of the principal meridian.
Edwards, Geo.	Ponoka, Alta.	Contract No. 25 of 1908; subdivision of townships 52, ranges 7 and 8; partial subdivision of township 52, range 9; all west of the fifth meridian.
Fairchild, C. C.	Edmonton, Alta.	Contract No. 16 of 1908; subdivision of townships 61, ranges 6 and 7, townships 63, ranges 4, 5, 6 and 7; partial subdivision of township 62, range 1; survey of the east outlines of townships 63 and 64, ranges 4, 5, 6, 7 and 8; all west of the fifth meridian. Partial subdivision of township 62, range 27, west of the fourth meridian.
Farncomb, A. E.	Lacombe, Alta.	Contract No. 12 of 1908; subdivision of townships 52, ranges 21, 22, 23 and 24, townships 53, ranges 21, 22 and 23; all west of the fifth meridian.
Fawcett, A.	Gravenhurst, Ont.	Contract No. 26 of 1908; subdivision of townships 50, 51 and 52, ranges 12 and 13, and township 50, range 14; survey of east outline of township 49, range 12; all west of the second meridian.
Fawcett, A.	Niagara Falls.	Retracement and restoration survey of the fourth meridian through townships 6 to 26 inclusive. Miscellaneous surveys in townships 10 and 11, range 22, west of the fourth meridian; miscellaneous surveys in townships 12 and 28, range 1, 50, range 6, 35, range 13, 14 and 15, range 24, and 11, range 30, all west of the third meridian. Miscellaneous surveys in townships 23 range 13, 25 range 22, 50 range 26, and 41 range 27; all west of the second meridian.
Fontaine, L. E.	Levis, Quebec.	Inspection of contracts Nos. 29 and 31 of 1907, and completion of the inspection of contracts Nos. 2, 16 and 24 of 1907; inspection of contracts Nos. 7, 18 and 27 of 1908; miscellaneous surveys in townships 55, range 5, and 57, range 7, west of the fifth meridian.
Green, T. D.	Ottawa, Ont.	Survey of the east outlines of townships 43 and 44, ranges 19 and 20, west of the fifth meridian; a traverse to locate coal lands on the south branch of Brizeau river.
Hawkins, A. H.	Listowel, Ont.	Survey of the twelfth base across ranges 15 to 19 inclusive; survey of the thirteenth base across ranges 24 to 28 inclusive; partial subdivision of township 49, range 27; sur-

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APPENDIX No. 1—*Continued.*

SCHEDULE of Surveyors employed, and work executed by them, from April 1, 1908, to March 31, 1909—*Continued.*

Surveyor.	Address.	Description of Work.
		vey of the east outline of township 50 and part of east outline of township 49, range 27, all west of the fifth meridian; survey of the thirteenth base across part of range 1, west of the sixth meridian.
Heathcott, R. V...	Edmonton, Alta..	Contract No. 28 of 1908; subdivision of townships 55 and 56, ranges 12 and 13, and partial subdivision of townships 54, ranges 12 and 13; all west of the fifth meridian. Contract No. 31 of 1907; subdivision of townships 52 and 53, ranges 18, 19 and 20, west of the fifth meridian.
Holcroft, H. S..	Toronto, Ont..	Subdivision of townships 81, ranges 24, 25 and 26, and township 82, range 24; resurvey of the east outline of township 82, range 24, and of the north outlines of townships 80, ranges 24, 25 and 26; all west of the fifth meridian; resurvey of the sixth meridian through township 81; survey of an addition to Shaftsbury settlement.
Hopkins, M. W..	Edmonton, Alta..	Contract No. 19 of 1908; subdivision of townships 61, 62 and 63, range 1, townships 61, 62, 63 and 64, range 2, townships 61 and 62, ranges 3, 4, 7, 8, 9 and 10; survey of the east outlines of townships 63 and 64, ranges 8 and 10; all west of the fourth meridian.
Hubbell, E. W..	Ottawa, Ont..	Inspection of contracts Nos. 6, 7, 11, 13, 27 and 28 of 1907, and contracts Nos. 6 and 11 of 1908; completion of inspection of contracts Nos. 13, 20 and 21 of 1907; mounding the east boundary of townships 39 and 40, range 17, and correction survey in township 39, range 16, west of the second meridian; traverse in township 52, range 4, west of the third meridian.
Johnson, A. W...	Kamloops, B.C...	Subdivision in townships 5 and 12, range 27, west of the sixth meridian, and in township 21, E.C.M.; resurvey in townships 7, 8, 9 and 11, range 22, in townships 3, 4, 5, 6, 9, 10, 11 and 12, range 23, west of the sixth meridian, and in township 26, E.C.M.; traverse survey in township 5, range 26, and in township 14, range 27, west of the sixth meridian; subdivision and resurvey in township 2, range 29, west of the sixth meridian, and in townships 3 and 4, range 5, west of seventh meridian; traverse and resurvey in townships 12, 13 and 16, E.C.M.; traverse and subdivision in townships 6 and 7, range 26, west of the sixth meridian; traverse, subdivision and resurvey in township 15, range 27, and townships 3, ranges 29 and 30, west of the sixth meridian; two triangulations from the Canadian Pacific railway to the boundary of the railway belt.
Kimpe, M..	Edmonton, Alta..	Contract No. 18 of 1908; subdivision of townships 49, 50 and 51, range 7, and townships 55 and 56, ranges 9, 10 and 11, and completion of the subdivision of township 54, range 11; all west of the fifth meridian.
Kirk, J. A..	Revelstoke, B.C...	Partial subdivision of townships 23, ranges 2 and 5, west of the sixth meridian.

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APPENDIX No. 1—*Continued.*

SCHEDULE of Surveyors employed, and work executed by them, from April 1, 1908, to March 31, 1909—*Continued.*

Surveyor.	Address.	Description of Work.
Kitto, F. H.. . . .	Ottawa, Ont.. . . .	Contract No. 11 of 1908; subdivision of townships 52, ranges 3 and 4, west of the third meridian.
Knight, R. H... . .	Edmonton, Alta.. . .	Contract No. 14 of 1908; subdivision of townships 61, 62 and 63, ranges 23 and 24, and township 65, range 24; all west of the fourth meridian.
Louergan, G. J.. . .	Buckingham, Que.. . .	Inspection of contracts Nos. 4 and 34 of 1907, and of contracts Nos. 2, 10, 14, 16, 21 and 23 of 1908; restoration surveys in townships 54 and 55, ranges 20 and 21, and miscellaneous surveys in township 62, range 12, township 61, range 13, townships 52, ranges 15 and 16, townships 64 and 65, range 21, township 50, range 26, and townships 51 ranges 25, 26 and 27; all west of the fourth meridian. Miscellaneous surveys in township 59, range 4, west of the fifth meridian.
McFarlane, W. G.. . .	Toronto, Ont.. . . .	Contract No. 1 of 1908; subdivision of townships 7, 8, 9, and 10, ranges 7, 8, 9, 10, 11 and 12, and townships 5 and 6, range 8; survey of the east outlines of townships 5 and 6, ranges 10, 11, 12 and 13; all west of the third meridian.
McFee, A.. . . .	Red Deer, Alta.. . . .	Survey of the boundaries of Buffalo Park reserve through townships 42 and 43, range 6, 42, 43 and 44, ranges 7 and 8, and township 43, range 8, west of the fourth meridian.
McGrandle, H... . .	Wetaskiwin, Alta... .	Contract No. 10 of 1908; subdivision of townships 60, ranges 19, 20, 21 and 22, township 59, range 21, and part of township 60, range 18 all west of the fourth meridian.
McMillan, Geo.....	Ottawa, Ont.. . . .	Resurvey of township 49, range 25, west of the second meridian; resurvey of townships 42, 43 and 44, range 1, west of the third meridian, including a resurvey of St. Laurent settlement; partial resurvey of township 35, range 5, west of the third meridian.
Miles, G. F.. . . .	Toronto, Ont.. . . .	Inspection of contracts Nos. 1, 3, 8, 9, 13 and 15 of 1908; retracement and restoration survey of townships 23, ranges 3 and 4, and township 24, ranges 2, 3 and 4; miscellaneous surveys in townships 23, range 2, and 18, range 14; all west of the third meridian; miscellaneous surveys in township 1, range 12, township 19, range 29, and township 18, range 30; all west of the second meridian.
Molloy, John... . .	Winnipeg, Man... . .	Contract No. 24 of 1908; subdivision of townships 9 and 10, ranges 14, 15 and 16, and township 10, range 13; all east of the principal meridian.
Montgomery, R. H.. .	Prince Albert, Sask....	Miscellaneous surveys in townships 43 and 44, range 8, 43, range 9, 48, range 13, and 51, ranges 14 and 15, west of the third meridian, and in township 42, range 24, west of the second meridian. Contract No. 4 of 1908; subdivision of townships 51 and 52, ranges 14 and 15, townships 51, ranges 16, 17 and 18, and partial subdivision of township 50, range 14, all west of the second meridian.

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APPENDIX No. 1—*Continued.*

SCHEDULE of Surveyors employed, and work executed by them, from April 1, 1908, to March 31, 1909—*Continued.*

Surveyor.	Address.	Description of Work.
Morrier, J. E...	Ottawa, Ont.	Survey of Churchill townsite.
Ord, L. R...	Calgary, Alta.	Contract No. 30 of 1908; subdivision of townships 32, range 7, 31 and 32, range 8, 30 and 31 range 9, and townships 29, 30 and 31, range 10; survey of the east outlines of townships 29, range 9, and 32, range 11; all west of the principal meridian.
Plunkett, T. H...	Salmon Arm, B.C.	Partial subdivision of townships 26, range 19, 26 and 27, range 21, 26 and 28, range 22, 28, range 23, 21, range 27, and township 21, range 28, west of the fifth meridian; partial subdivision of township 23, range 2, west of the sixth meridian; partial subdivision and resurvey of township 25, range 28, west of the fifth meridian; traverse in township 27, range 22, and township 20, range 29, west of the fifth meridian; traverse in township 20, range 1, west of the sixth meridian.
Ponton, A. W...	Macleod, Alta.	Survey of the fifth meridian from township 85 to township 107 inclusive.
Reilly, Wm. R...	Regina, Sask.	Retracement and restoration survey in townships 46, ranges 21 and 22, townships 47a, ranges 24 and 25, and township 49, range 23; partial retracement and restoration survey of townships 45 and 49, range 21, townships 44, 45 and 49, range 22, and townships 46, ranges 23 and 24; traverse in township 42, range 27; all west of the second meridian.
Robinson, E. W...	Chase, B.C.	Partial subdivision of township 23, range 5, townships 21 and 23, range 7, and township 22, range 8; traverse survey in township 23, range 4; subdivision and traverse in township 23, range 2; subdivision and resurvey in township 22, range 6; traverse, subdivision and resurvey in township 23, range 6, and township 22, range 7; all west of the sixth meridian.
Ross, Jos. E...	Kamloops, B.C.	Partial subdivision in townships 20 and 21, range 12, townships 16 and 23, range 22, townships 20 and 21, ranges 23 and 24, and township 18, range 25; partial resurvey of townships 18 and 19, range 47, and townships 21, ranges 20 and 21; traverse, subdivision and resurvey in township 18, range 16, townships 19, ranges 12, 14, 15, 16 and 24, townships 20, ranges 13, 15, 16, 19 and 21, and township 22, range 17; subdivision and traverse in township 15, range 22, township 16, range 26, township 19, range 13, township 20, range 21, and township 23, range 23; subdivision and resurvey in township 20, range 14, township 22, range 21, and townships 17, 18 and 19, range 25; all west of the sixth meridian.
Roy, Geo. P...	Quebec	Contract No. 27 of 1908; subdivision of townships 57, ranges 10 and 11, and township 58, range 11; all west of the fifth meridian.
Saint Cyr, A...	Ottawa, Ont.	Survey of the sixth meridian through townships 52, 51, 48 and part of 47; survey of the fifteenth base west of the fifth meridian across ranges 24, 23, 22, 21 and part of range 20.

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APPENDIX No. 1—*Continued.*

SCHEDULE of Surveyors employed, and work executed by them, from April 1, 1908, to March 31, 1909—*Continued.*

Surveyor.	Address.	Description of Work.
Saint Cyr, J. B.	Montreal.	Subdivision of townships 80, ranges 3 and 4; survey of the east outlines of townships 77, 78 and 79, range 5, the south outline of township 79, range 3, and the north outline of township 78, range 4; all west of the sixth meridian; survey of Dnrvagan settlement in township 80, range 4, west of the sixth meridian, and of an addition to Peace River Landing settlement in township 83, range 21, west of the fifth meridian.
Saunders, B. J.	Edmonton, Alta.	Survey of the eleventh base through ranges 8 to 18 inclusive, and part of range 19, west of the fifth meridian.
Selby, H. W.	Toronto, Ont.	Subdivision of townships 73 and 74, range 10, and township 74, range 13; partial subdivision of townships 72, ranges 3, 5, 6, 9 and 10, townships 73, ranges 4, 5, 6, and 11, township 74, range 9, township 80, range 19, and townships 81, ranges 19 and 20; survey of the east outline of township 73, range 13, and part of the east outline of township 74, range 12; all west of the fifth meridian; retracement of the Hndson's Bay Company reserve at Lesser Slave lake.
Seymour, H. L.	Edmonton, Alta.	Contract No. 29 of 1907; subdivision of townships 44 and 47, range 4, townships 48 and 49, range 5, and township 49, range 6; partial resurvey of township 43, range 4; survey of the east outlines of townships 45 and 46, range 5; all west of the fifth meridian. Contract No. 22 of 1908; snbdivision of townships 45 and 46, ranges 4, 5 and 6; survey of the east outlines of township 47, range 6, and townships 47 and 48, range 7; all west of the fifth meridian.
Stacey, A. G.	Ottawa, Ont.	Contract No. 8 of 1908; subdivision of townships 4 and 5, ranges 4 and 5; all west of the fourth meridian.
(Deceased, balance of contract performed by A. Driscoll, D.L.S.)		
Steele, I. J.	Ottawa, Ont.	Contract No. 15 of 1908; subdivision of townships 1, 2, 3 and 4, ranges 19, 20, 21 and 22, townships 2 and 3, ranges 23, 24, 25 and 26, and township 2, range 27; survey of the east outlines of townships 1, ranges 24, 25, 26, 27 and 28, and the south outlines of townships 1, ranges 23, 24, 25, 26 and 27; partial resurvey of the south outline of township 1, range 18; all west of the second meridian.
Talbot, A. C.	Calgary, Alta.	Survey of villa lots at lake Minnewanka; survey of a road from Laggan to lake Louise; partial subdivision of township 28, range 16, west of the fifth meridian.
Tensdale, C. M.	Concord, Ont.	Contract No. 26 of 1907; subdivision of townships 27 and 28, ranges 10 and 11, west of the principal meridian. Contract No. 20 of 1908; subdivision of townships 25, ranges 3, 4, 5, 6 and 7, and township 26, range 7; all west of the principal meridian.
Thibaudeau, W.	Ottawa, Ont.	Preliminary exploration and hydro-topographic surveys on St. Mary, Waterton, Southfork and Crowsnest rivers, and on Oil Pass and Tib creeks; preliminary explorations on Belly, Oldman and Livingstone rivers, and on Pincher, Lee, Mills, Gold and Blairmore creeks.

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APPENDIX No. 1—*Continued.*

SCHEDULE of Surveyors employed, and work executed by them, from April 1, 1908, to March 31, 1909—*Continued.*

Surveyor.	Address.	Description of Work.
Tyrrell, J. W.	Hamilton, Ont.	Contract No. 17 of 1908; subdivision of townships 25 and 28, range 1, east of the principal meridian; subdivision of townships 25, 26, 27 and 28, range 1, and townships 25, 26 and 27, range 2; survey of east outlines of township 28, range 3; all west of the principal meridian.
Waddell, W. H.	Hamilton, Ont.	Contract No. 23 of 1908; subdivision of townships 63 and 64, range 13, townships 63, 64 and 65, ranges 14 and 15; all west of the fourth meridian.
Waldron, John.	Moosejaw, Sask.	Contract No. 3 of 1908; subdivision of townships 4, 5, 6 and 7, range 20, townships 5, ranges 21 and 22, townships 5 and 6, range 23, townships 1, 2, 3 and 4, ranges 26 and 27, and townships 2, 3 and 4, range 30; completion of subdivision of townships 6 and 7, ranges 31 and 22; all west of the third meridian; subdivision of townships 1, 2, 3, 4 and 5, range 1, west of the fourth meridian.
Wallace, J. N.	Calgary, Alta.	Survey of the Yukon-British Columbia boundary from Tatshenshini river to Tak-hini river
Warren, Jas.	Walkerton, Ont.	Resurvey of the fourth base across ranges 2, 3 and 4; partial subdivision of township 13, range 2, townships 11, 12 and 13, range 3, townships 10 and 11, range 4, and townships 22 and 23, range 5; traverse in township 14, range 1; all west of the fifth meridian.
Watt, Geo.	Ottawa, Ont.	Contract No. 9 of 1908; subdivision of townships 1, 2, 3, 8 and 9, range 13, township 8, ranges 14 and 15, townships 4, 5 and 7, ranges 16 and 17, townships 4, 5, 6 and 7, ranges 18 and 19; partial subdivision of townships 7, ranges 13, 14 and 15; survey of the east outlines of township 4, range 13, and townships 6, ranges 16 and 17; all west of the third meridian.
Wheeler, A. O.	Calgary, Alta.	Examination and classification of the lands undisposed of in the railway belt, British Columbia, above and below Revelstoke, above and below Golden and in the vicinity of Shuswap lake.
Wiggins, T. H.	Saskatoon, Sask.	Correction survey in township 31, range 9, west of the third meridian.
Young, W. H.	Lethbridge, Alta.	Partial subdivision of township 4, range 1, township 6, range 2, townships 5, 6 and 7, range 3, and township 7, range 4; all west of the fifth meridian; partial subdivision of township 3, range 30, and traverse in townships 11, ranges 22 and 23; all west of the fourth meridian.

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APPENDIX No. 2.

SCHEDULE showing for each surveyor employed from April 1, 1908, to March 31, 1909, the number of miles surveyed of township section lines, township outlines, traverses of lakes and rivers and resurvey, also cost of same.

Surveyor.	Miles of section lines.	Miles of outlines.	Miles of traverse.	Miles of resurvey.	Total mileage.	Total cost.	Cost per mile.	By day work or by contract.
Aylsworth, C. F.			5 30	270 50	275 80	9,855 00	35 73	Day.
Baker, J. C.	421 38	62 32	82 23		565 93	16,024 84	28 31	Contract.
Beatty, David			52 50		52 50	6,733 00	128 24	Day.
+Belanger, P. R. A.			87 11	5 50	92 61	13,386 35		"
Bingham, E. R.			5 31		5 31	282 90	53 28	"
Bolton, Lewis.	514 65		44 08		558 73	4,286 63	7 67	Contract.
Bourgault, C. E.			26 05	334 75	360 80	9,063 96	25 12	Day.
Bourgeois, A.	94 34	10 08	10 50		114 92	3,363 16	29 26	Contract.
Bray, Edgar.	106 00	30 00	5 50		141 50	4,381 27	30 96	"
Cautley, R. H.	1,148 60	50 20	42 33		1,241 13	9,441 66	7 60	"
Cautley, R. W.	359 88	31 28	368 58		759 74	12,773 40	16 81	"
Christie, Wm.	10 00	52 00		64 50	126 50	7,310 57	57 79	Day.
Côte, J. L.	532 92	73 46	140 83		747 21	19,980 71	26 74	Contract.
Davies, T. A.	62 00			58 50	120 50	10,273 17	85 25	Day.
Deans, W. J.	33 00		16 80	127 50	177 30	8,000 00	45 12	"
*Driscoll, A.	880 79	90 84	117 52		1,089 15	8,880 35	8 15	Contract.
Dumais, P. T. C.	162 90	17 00	60 02		239 92	5,861 82	24 43	"
Edwards, Geo.	133 10	18 00	30 01		181 20	5,058 37	27 91	"
Fairchild, C. C.	348 63	113 56	131 14		593 33	16,959 50	28 58	"
Farncomb, A. E.	340 12	42 19	77 81		460 12	12,361 24	26 86	"
Fawcett, Adam	316 21	42 20	51 46		409 87	10,957 21	26 73	"
Fawcett, Thos.			14 55	171 75	186 30	4,466 78	23 98	Day.
+Fontaine, L. E.			7 00	12 00	19 00	12,679 62		"
Green, T. D.	1 00	24 00	4 32		29 32	4,200 00	143 24	"
Hawkins, A. H.	8 00	65 50			73 50	13,500 00	183 67	"
Heathcott, R. V.	516 59	56 34	180 66		753 59	19,485 37	25 85	Contract.
Holcroft, H. S.	163 75	24 00	72 16	27 25	287 16	14,638 63	51 15	Day.
Hopkins, M. W.	779 23	70 29	259 05		1,108 57	27,364 48	24 68	Contract.
+Hubbell, E. W.			3 95		3 95	12,628 23		Day.
Johnson, A. W.	20 00		70 00	90 00	180 00	14,733 43	81 89	"
Kimpe, M.	451 21	32 68	27 33		511 22	15,334 43	29 99	Contract.
Kirk, J. A.	4 04		3 61	7 00	14 65	344 10	23 48	Day.
Kitto, F. H.	86 72		29 11		115 83	2,989 01	25 80	Contract.
Knight, R. H.	336 15	35 96	42 71		414 82	11,812 63	28 55	"
+Loneragan, G. J.			34 40	206 75	241 15	12,319 35		Day.
McFarlane, W. G.	1,260 81	88 13			1,348 94	10,137 27	7 51	Contract.
McFee, A.			69 50		69 50	1,300 00	18 70	Day.
McGrandle, Hugh	248 45		21 30		269 75	7,045 59	26 12	Contract.
McMillan, Geo.			96 75	221 00	317 75	10,714 79	33 72	Day.
+Miles, C. F.			8 00	205 00	273 00	11,492 51		"
Molloy, John	476 80	42 66			519 46	15,418 30	29 68	Contract.
Montgomery, R. H.			19 25	8 25	27 50	828 20	30 11	Day.
Montgomery, R. H.	579 18	18 09	33 70		630 97	12,706 92	29 48	Contract.
Morrier, J. E.			66 12		66 12	5,339 04	80 74	Day.
Ord, L. R.	228 62	30 08	64 44		323 14	7,512 99	23 25	Contract.
Plunkett, Thos. H.	33 96		34 77	5 00	73 73	9,270 11	125 73	Day.
Ponton, A. W.		138 00			138 00	10,925 00	79 17	"
Reilly, Wm. R.			154 34	242 50	396 84	8,817 98	22 22	"
Robinson, E. W.	22 01		47 98	1 94	71 93	12,000 00	166 83	"
Ross, Jos. E.	116 32		68 69	31 20	215 61	11,274 80	52 29	"
Roy, Geo. P.	139 12		1 50		140 62	4,262 33	30 31	Contract.
Saint-Cyr, A.		47 50			47 50	15,000 00	315 79	Day.
Saint-Cyr, J. B.	115 00	20 00	55 60		190 60	10,450 00	54 82	"
Saunders, B. J.		67 50			67 50	15,100 00	223 70	"
Selby, H. W.	255 25	52 90	67 72		375 87	12,595 00	33 27	"
Seymour, H. L.	514 48	65 94	32 16		613 58	16,510 01	26 90	Contract.
*Stacey, A. G.	181 42	12 06			193 48	1,574 59	8 13	"
Steele, I. J.	1,287 55	126 03	114 14		1,527 72	10,809 58	7 07	"
Talbot, A. C.	2 00		8 00		10 00	667 75	66 77	Day.
Teasdale, C. M.	462 74	30 07	75 85		568 66	14,978 77	26 34	Contract.
Tyrell, J. W.	511 22	23 59	5 77		540 58	15,996 50	29 59	"
Waddell, W. H.	375 22		106 73		481 95	12,304 99	25 33	"
Waldron, John	1,260 51	118 59	2 93		1,382 03	10,931 49	7 91	"
Wallace, J. N.			36 80		36 80	15,530 09	422 01	Day.
Warren, Jas.	77 50	8 00	18 00	19 00	122 50	9,508 77	75 90	"
Watt, Geo. H.	1,125 15	173 59	5 75		1,304 49	10,829 20	8 30	Contract.
Wiggins, T. H.				3 50	3 50	65 00	18 57	Day.
Young, W. H.	79 90	13 00	4 49	2 00	99 39	9,000 00	90 55	"
	16,984 42	2,018 63	3,323 61	2,175 39	24,502 05	681,418 74		

* Mr. A. G. Stacey, D.L.S., died and the contract was completed by A. Driscoll, D.L.S., with the same party. + Inspector of contract surveys.

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APPENDIX No. 3.

LIST of Lots in the Yukon Territory, surveys of which have been received from April 1, 1908, to March 31, 1909.

GROUP No. 1.

Lot No.	Area in Acres.	Surveyor.	Year of Survey.	Date of Approval.	Claimant.	Remarks.
41	68.1	C. S. W. Barwell	1908	*	Albert P. Shulze	Surface.

GROUP No. 2.

N. 1 K. 24	0.363	James Gibbon	1907	June 10, 1908	.....	Surface.
		C. W. MacPherson	1908	*	White Channel Gold Hill Hydraulic Co., Ltd.	"
180	46.2	C. S. W. Barwell	1908	*	Capt. T. H. Alcock	Riverview M. C.
375	51.6	" ..	1908	Feb. 23, 1908 ..	Ernest Sleuter	New Hope M. C.
376	51.6	" ..	1908	Nov. 11, 1908 ..	Lizzie Olivia Craig	Iron Duke M. C.
377	51.6	" ..	1908	" 11, 1908 ..	" ..	Black Prince M. C.
378	51.6	" ..	1908	" 11, 1908 ..	" ..	Belle M. C.
378	.....	" ..	1908	*	N. A. T. & T. Co.	Klondike Lode M.C.
380	51.3	" ..	1908	Nov. 11, 1908 ..	Lizzie Olivia Craig	Chas. L. M. C.
387	640.0	C. W. MacPherson	1907	*	Dept. of Indian Affairs ..	Indian Reserve.
389	20.85	James Gibbon	1908	Sept. 11, 1908 ..	John Nicholas	Tacoma M. C.
392	51.3	C. S. W. Barwell	1908	Nov. 11, 1908 ..	Lizzie Olivia Craig	Walter D. M. C.
393	51.6	" ..	1908	" 11, 1908 ..	" ..	Thelma M. C.
394	51.6	" ..	1908	" 11, 1908 ..	" ..	Lottie M. C.
395	45.9	" ..	1908	*	N. A. T. & T. Co.	Klondike Lode Ext'n No. 1 M. C.
396	32.73	James Gibbon ..	1908	Sept. 11, 1908 ..	Margaret J. Mitchell <i>et al.</i> ..	Comstock M. C.
398	51.65	" ..	1908	" 11, 1908 ..	Jane S. Orrell	Silver Knight M. C.
400	47.5	C. S. W. Barwell	1908	Oct. 2, 1908 ..	Emil Mohr	Edna M. C.
401	11.5	" ..	1908	*	N. A. T. & T. Co.	Surface.
402	11.5	" ..	1908	*	" ..	"
403	51.0	" ..	1908	*	" ..	Klondike Lode Ext'n No. 3 M. C.
404	50.5	" ..	1908	*	L. Schmidt	An Curd M. C.
405	51.6	" ..	1909	*	Thos. Mulcahey <i>et al.</i>	Dunsmuir M. C.
406	51.6	" ..	1909	*	" ..	Bald Eagle M. C.
407	51.6	" ..	1909	*	" ..	Black Jack M. C.

GROUP No. 4.

B 3	11.24	C. W. MacPherson	1908	Oct. 3, 1903 ..	The English Church Missions	Surface.
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*Not yet approved.

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GROUP No. 5.

Lot No.	Area in Acres.	Surveyor.	Year of Survey.	Date of Approval.	Claimant.	Remarks.
110	51.53	H. G. Dickson..	1907 *		A. B. Palmer	Centre Star M. C.
111	46.37	"	1907		"	Papoose M. C.
112	49.14	"	1907		"	Morning M. C.
113	30.35	"	1907		"	Mack M. C.
115	45.56	"	1908 *		Wm. Clark	Verona M. C.
121	0.77	N. A. Burwash..	1908	Sept. 25, 1908..	F. R. Alley	Flora M. C.
122	13.15	"	1908	" 25, 1908..	"	Alma M. C.
123	9.88	"	1908	" 25, 1908..	"	Midget M. C.
124	2.09	"	1908	" 25, 1908..	"	Flora No. 2 M. C.
125	49.07	"	1908	" 25, 1908..	W. S. Thomas	Copper Chief M. C.
126	39.58	"	1908	" 25, 1908..	"	Copper Nugget M.C.
127	138.67	"	1908	Oct. 17, 1908..	L. E. Belney and Karl Weik	Manitou Copper M.C.
128	49.45	"	1908	" 17, 1908..	W. S. Thomas	Kluane M. C.
129	48.91	"	1908	" 17, 1908..	"	Little Johnnie M. C.
130	31.62	"	1908	" 17, 1908..	"	Overland M. C.
131	3.98	"	1908	Sept. 25, 1908..	"	Corsair M. C.
132	47.58	"	1908	Oct. 17, 1908..	L. E. Belney and Karl Weik	Grover M. C.
133	51.65	"	1908	July 15, 1908..	W. S. Thomas	Paragon M. C.
134	48.17	"	1908	Sept. 25, 1908..	"	Ora M. C.
135	47.08	"	1908	" 25, 1908..	"	Alvia M. C.
136	44.74	"	1908	July 15, 1908..	"	Little Frank M. C.
137	51.65	"	1908	" 15, 1908..	"	I. O. U. M. C.
138	51.65	"	1908	" 15, 1908..	"	I. and E. M. C.
139	51.38	"	1908	" 15, 1908..	"	Reta M. C.
140	51.63	"	1908	" 15, 1908..	"	Bernice M. C.
141	51.49	"	1908	" 15, 1908..	"	York M. C.
143	45.94	"	1908	" 8, 1908..	"	Helena M. C.
144	17.58	"	1908	" 8, 1908..	"	Florence M. C.
145	31.02	"	1908	" 8, 1908..	"	Iron Horse M. C.
146	13.74	"	1908	" 8, 1908..	S. C. Barrington	Carnage M. C.
148	47.03	"	1908	" 8, 1908..	W. S. Thomas	Rothsay, M. C.
149	39.24	"	1908	Sept. 28, 1908..	"	Autumn M. C.
150	12.02	"	1908	July 7, 1908..	"	Sour Dough M. C.
154	28.48	H. G. Dickson..	1908	June 29, 1908..	E. A. Dickson	Dick M. C.
155	45.77	"	1908	" 29, 1908..	Paul Jameson	Hope M. C.
156	51.65	"	1908	"	William Maher	Copper Cliff M. C.
157	11.35	"	1908	March 2, 1909	C. H. Johnston	Mabel Extension
176	33.65	N. A. Burwash..	1908	July 15, 1908..	W. S. Thomas	Frac'n M. C.
177	1.37	"	1908	Sept. 25, 1908..	W. L. Forrest	Pueblo Star No. 2 M. C.
178	16.46	"	1908	" 25, 1908..	K. Weik	Flora No. 3 (Frac-tional) M. C.
179	14.00	"	1908	Feb. 2, 1909..	P. F. Scharschmidt	Dawson M. C.
180	21.91	"	1908	Oct. 2, 1908..	A. B. Palmer	Surface.
181	6.36	"	1908	" 2, 1908..	"	Prudence M. C.
						Pocahauntus M. C.

*Not yet approved.

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GROUP No. 6.

Lot No.	Area in Acres.	Surveyor.	Year of Survey.	Date of Approval.	Claimant.	Remarks.
20	50.44	H. G. Dickson.	1907	*	J. H. Conrad	Venus M. C.
21	51.13	"	1907	*	"	Venus No. 2 M. C.
22	11.12	"	1907	*	"	Venus Fraction M.C.
24	3.52	"	1907	*	"	Mars M. C.
25	51.08	"	1907	*	"	M. & M. M. C.
26	21.48	"	1907	*	"	Vault M. C.
27	51.65	"	1907	*	"	Uranus M. C.
28	50.83	"	1907	*	"	Uranus No. 2 M. C.
29	23.62	"	1907	*	"	Cappella M. C.
30	44.31	"	1907	*	"	Joe Petty M. C.
31	46.75	"	1907	*	"	Little Johnny M. C.
32	32.58	"	1907	June 24, 1908.	"	Reliance M. C.
33	51.65	"	1907	*	"	Black Jack M. C.
34	51.65	"	1908	Jan. 19, 1909.	"	Montana M. C.
35	50.94	"	1908	" 19, 1909.	"	Mountain Hero M.C.
36	51.16	"	1907	*	"	Monarch M. C.
37	42.10	"	1908	Jan. 19, 1909.	"	Commander M. C.
38	34.69	"	1908	" 19, 1909.	"	Jumbo M. C.
39	35.03	"	1908	" 19, 1909.	"	O. K. M. C.
40	37.33	"	1908	*	W. P. Granger.	Lake Shore M. C.
41	10.15	"	1908	Jan. 19, 1909.	J. H. Conrad	Fox M. C.
42	17.45	"	1908	" 19, 1909.	"	Mountain Lion M.C.
43	35.97	"	1908	" 19, 1909.	"	Elephant M. C.
44	51.65	"	1907	Apr. 24, 1908.	"	4th of July M. C.
45	50.11	"	1907	" 19, 1908.	"	Gurteen M. C.
46	43.86	"	1907	*	"	Empress M. C.
47	40.01	"	1907	*	"	Princess No. 2 M. C.
48	45.84	"	1907	*	"	T. & B. M. C.
49	40.80	"	1907	*	"	Sunrise M. C.
50	39.62	"	1907	*	"	Sunset M. C.
51	35.75	"	1907	*	"	Thistle M. C.
52	44.01	"	1907	*	"	Rose M. C.
53	6.61	"	1907	*	"	Fair Play M. C.
55	40.21	"	1907	*	"	Aurora M. C.
56	51.65	"	1907	*	"	Glacial Lake M. C.
57	19.15	"	1907	*	"	Columbian M. C.
58	24.21	"	1907	*	"	Westover M. C.
59	8.98	"	1908	Jan. 19, 1909.	"	Mamouth M. C.
61	51.65	"	1907	*	"	Caribou M. C.
62	51.55	"	1907	*	"	Pride of Yukon M.C.
63	47.48	"	1907	*	"	Pride of Yukon No. 2 M. C.
64	40.16	"	1907	*	"	Jupiter M. C.
65	51.64	"	1907	*	"	Lone Jack M. C.
66	44.79	"	1907	*	"	Chesley M. C.
67	47.67	"	1907	*	"	Eureka M. C.
68	47.42	"	1907	*	"	Eureka No. 2 M. C.
69	9.04	"	1907	*	"	Nipper M. C.
70	49.65	"	1907	*	"	Royston M. C.
71	42.90	"	1907	*	"	Pedro M. C.
72	24.80	"	1907	*	"	Vega M. C.
73	29.29	"	1907	*	"	Vanguard M. C.
74	29.14	"	1907	*	"	Dawson M. C.
75	49.86	"	1907	*	"	Bellajara M. C.
76	34.69	"	1907	*	"	Annex M. C.
77	79.91	"	1907	Mar. 2, 1909.	"	Surface.
78	14.00	"	1908	*	J. M. Pooley & J. M. Stewart	Maybelle (Fraction M. C.)
98	48.89	"	1907	*	Jas. C. Grace	Washington M. C.
99	51.65	"	1908	*	Laura Hill	Legal Tender M. C.
100	50.40	"	1908	*	E. M. Morgan	Azurite M. C.
101	47.74	"	1908	*	"	Malachite M. C.
102	49.83	"	1908	*	"	Cromwell M. C.

*Not yet approved.

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APPENDIX No. 4.

LIST of Miscellaneous Surveys in the Yukon Territory, returns of which have been received from April 1, 1908, to March 31, 1909.

Year.	Surveyor.	Description of Survey.
1901	P. T. C. Dumais.....	Glacier creek base line (part of) a tributary of Gold creek.
1901	".....	Moose creek base line (part of) a tributary of Fortymile river.

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APPENDIX No. 5.

STATEMENT of work executed in the office of the chief draughtsman:—

Letters of instruction to surveyors.. . . .	225
Progress sketches received and filed	1,308
Declarations of settlers received and filed....	436
Returns of separate blocks of timber berths received.. . . .	300
Plans received from surveyors.. . . .	503
Field books received from surveyors.. . . .	750
Timber reports received.. . . .	276
Observations for magnetic declination received.. . . .	11
Preliminary township plans prepared.. . . .	492
Sketches made.. . . .	2,163
Maps and tracings made.. . . .	342
Plans of Yukon lots received.. . . .	154
Plans of miscellaneous Yukon surveys received....	6
Tracings of Yukon survey plans made.. . . .	163
Yukon lots reduced to 40 chains to 1 inch and plotted on group plans.. . . .	242
Yukon traverses reduced to 40 chains to 1 inch and plotted on group plans.. . . .	8
Returns of surveys examined—	
Township subdivision.. . . .	501
Township outline.. . . .	370
Road plans.. . . .	280
Railway plans.. . . .	76
Mineral claims.. . . .	17
Timber berths.. . . .	213
Correction and other miscellaneous surveys.. . . .	105
Township plans compiled.. . . .	692
Townsite settlement and other plans compiled.. . . .	14
Proofs of plans examined.. . . .	487
Township plans printed.. . . .	609
Townsite and settlement plans printed.. . . .	14
Descriptions written.... . . .	9
Pages of field notes copied.. . . .	463
Applications for various information dealt with.. . . .	2,034
Files received and returned.. . . .	2,124
Letters drafted.. . . .	6,476
Books received from record office and used in connection with office work.. . . .	5,237
Books returned to record office.. . . .	6,136
Plans other than printed township plans received from record office and used in connection with office work.. . . .	1,038
Plans returned to record office.. . . .	1,061
Volumes of plans received from record office and used in connection with office work.. . . .	93
Volumes of plans returned to record office.. . . .	105
Books sent to record office to be placed on record.. . . .	615
Plans other than township plans sent to record office to be placed on record.. . . .	429

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APPENDIX No. 5—*Continued.*

Sectional maps (3 miles to 1 inch)—	
Revised..	46
Reprinted..	34
New drawings of old worn out sheets..	1
New tracings of old worn out sheets..	8
Sectional maps (6 miles to 1 inch)—	
Reprinted..	11
Proofs of sectional sheets examined..	47

APPENDIX No. 6.

LIST of new editions of sectional maps issued from April 1, 1908, to March 31, 1908.

[Scale 3 miles to 1 inch.]

No.	Name.	No.	Name.	No.	Name.	No.	Name.
18	Wood Mountain.	72	Portage la Prairie ..	166	Sounding Creek	268	Carlton.
19	Willowbunch.	114	Calgary	167	Bad Hills.	269	Prince Albert
20	Souris	115	Blackfoot	169	Touchwood	270	Pasquia.
21	Turtle Mountain.	116	Rainy Hills.	170	Yorkton	271	Mossy Portage.
23	Emerson.	117	Red Deer Forks ..	214	Rocky Mt. House ..	317	Fort Pitt.
24	Lake of the Woods ..	118	Rush Lake	217	Tramping Lake	318	Shell River.
64	Porcupine	119	Regina	218	Saskatoon	319	Prince Albert N.
69	Moosejaw	121	Riding Mountain. ..	219	Humboldt		
70	Moose Mountain.	123	Fort Alexander.	221	Swan River		

[Scale 6 miles to 1 inch.]

22	Dufferin.	215	Red Deer	265	Peace Hills.	366	Saddle Lake.
164	Morley	216	Sullivan Lake.	266	Ribstone Creek	416	La Biche.
168	The Elbow	264	Brazeau.	267	Battleford		

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APPENDIX No. 7.

STATEMENT of work executed in the survey records office from April 1, 1908, to March 31, 1909.

Files received and dealt with.. . . .	15,078
Letters drafted.. . . .	4,741
Reports, memos. to Council, drafts.. . . .	1
Plans, tracings, &c., copied or compiled.. . . .	742
Statutory declarations copied or mailed.. . . .	407
Plans sent to agents, registrars, &c.. . . .	19,578
Pages of field notes copied.. . . .	892
Prints of plans received and stored.. . . .	179,725
Original plans received and recorded.. . . .	1,238
Original field notes received and recorded.. . . .	596
Letters written to agents.. . . .	1,444
Registered parcels mailed.. . . .	1,739

Work performed for the Topographical Surveys Branch.

Books searched for.. . . .	7,552
Books sent.. . . .	5,973
Books returned.. . . .	6,775
Plans searched for.. . . .	3,386
Plans sent.. . . .	2,515
Plans returned.. . . .	1,229
Volumes searched for.. . . .	99
Volumes sent.. . . .	69
Volumes returned.. . . .	132

Work done for the Patents Branch.

Plans searched for.. . . .	1,070
Plans sent.. . . .	1,034
Plans returned.. . . .	916
Field books searched for.. . . .	83
Field books sent.. . . .	82
Field books returned.. . . .	37

Work done for other Branches.

Plans searched for.. . . .	533
Plans sent.. . . .	529
Plans returned.. . . .	464
Field books searched for.. . . .	360
Field books sent.. . . .	352
Field books returned.. . . .	424

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APPENDIX No. 8.

STATEMENT of work executed in the photographic office from April 1, 1908, to March 31, 1909.

—	3½ x 3½	4 x 5	5 x 7	8 x 10	10 x 12	11 x 14	16 x 18	18 x 20	24 x 30	30 x 36	36 x 42	42 x 48	Total.
Dry plate negatives.....		316	848			48							1,212
Bromide prints.....		36	44	311	82	139	179	141	50	24	8	3	1,017
Vandyke prints.....				5	17	48	108	89	86	61	32	13	459
Silver prints.....		1,822	4,293	52		21	9						5,697
Lantern transparencies.....	390												390
Photographs mounted.....			468	46	1	67	93	10					685
Wet plate negatives.....				127		134	770	230					1,261
Photo litho plates.....								872					872
	390	1,674	5,653	541	100	457	1,159	1,342	136	85	40	16	11,593

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APPENDIX No. 9.

STATEMENT of work executed in the lithographic office from April 1, 1908, to March 31, 1909.

MONTH.	MAPS.		TOWNSHIPS.		FORMS, &c.	
	No.	Copies.	No.	Copies.	No.	Copies.
1908.						
April	11	750	50	10,000	13	7,140
May	1	200	38	7,600	22	7,370
June	11	3,850	96	19,200	4	3,550
July	10	55,200			3	3,200
August	7	6,750	7	1,400	10	14,950
September			92	18,400	1	3,000
October	3	2,700	25	5,000	6	10,175
November	3	3,200	25	5,000	3	750
December	10	4,600	73	14,600	5	8,350
1909.						
January	10	4,725	105	21,000		
February	10	11,850	33	6,600	1	2,000
March	17	46,025	38	7,600	5	1,700
Total	93	139,850	582	116,400	73	62,185

RECAPITULATION.

	No.	Copies.	Impressions.	Cost.
				\$ cts
Maps	93	139,850	305,317	2,659 28
Townships	582	116,400	118,400	4,493 04
Forms, &c.	73	62,185	70,735	975 68
Total	748	318,435	494,452	8,128 00

APPENDIX No. 10.

List of employees of the Topographical Surveys Branch at Ottawa, giving the name, classification, duties of office and salary of each.

(Metcalf Street, Corner of Slater.)

Name.	CLASSIFICATION.		Duties of Office.	Salary.
	Division	Sub-division.		
				\$ cts.
Deville, E., D.T.S., LL.D.	1	A	Surveyor General.	3,200 00
CORRESPONDENCE.				
Brady, M.	1	B	Secretary	2,100 00
Cullen, M. J.	3	A	Stenographer.	1,000 00
Moran, J. F.	3	B	Typewriter and clerk.	550 00
Williams, E. R.	3	B	Correspondence clerk.	600 00
Lynch, F.	3	B	Typewriter.	700 00
Addison, W. G.	3	B	Typewriter.	500 00
Paquette, A.	3	B	Clerk.	700 00
Pegg, A.			Messenger.	700 00
ACCOUNTS.				
Hunter, R. H.	2	A	Accountant	1,800 00
Wilkinson, Percy	3	A	Asst. accountant.	900 00

DRAUGHTING OFFICE.

General direction and supervision of the technical work.

Symes, P. B.	1	B	Chief draughtsman.	2,100 00
Shanks, T., B.A.Sc., D.L.S.	1	B	Asst. chief draughtsman.	2,100 00

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DRAUGHTING OFFICE—FIRST DIVISION.

REGISTRATION of Surveyors' plans, field notes and other documents; preparation of instructions to surveyors, annual and other reports; answering inquiries about surveys and preparing preliminary plans of townships.

Name.	CLASSIFICATION.		Duties of Office.	Salary.
	Division	Sub-division.		
				\$ cts.
Brown, T. E., B.A.	1	B	Chief of division.....	2,100 00
Green, W. T., B.A., D.L.S.	2	A	Asst. chief of division.	1,600 00
Umbach, J. E., Grad. S.P.S., D.L.S.	2	A	" "	1,600 00
Barber, H. G., Grad. S.P.S., D.L.S.	2	A	" "	1,600 00
Rice, F. W., Grad. School of Mining, D.L.S.	2	A	" "	1,600 00
Belleau, J. A., D.L.S.	2	A	" "	1,600 00
McRae, A. D., B.A., B. Sc.	2	B	Draughtsman.....	1,100 00
Carroll, M. J., Grad. S.P.S.	2	B	"	1,300 00
Grant, A. W., B.A.	2	B	"	1,100 00
Peaker, W. J., Grad. S.P.S.	2	B	"	1,000 00
Grant, A. M., B. Sc.	2	B	"	1,000 00
Milliken, J. B., B.A., B. Sc.	2	B	"	1,000 00
MacMillan, J. P., B.E.	2	B	"	1,000 00
Cordukes, J. P., B. Sc.	2	B	"	900 00
Wadlin, L. N., B. Sc.	2	B	"	900 00
Hayward, H. E., B. Sc.	2	B	"	1,000 00
Sylvain, J.	2	B	"	1,450 00
Rochon, E. C.	2	B	"	1,100 00
McLaughlin, M. J.	2	B	"	1,100 00
Holbrook, C. H.	3	B	Clerk.....	700 00
Burkholder, E. L.	3	B	"	550 00

DRAUGHTING OFFICE—SECOND DIVISION.

EXAMINING the returns of surveys in Manitoba, Saskatchewan and Alberta; plotting the plans of townships and checking the accounts for contract surveys.

Nash, T. S., Grad. S.P.S., D.L.S.	1	B	Chief of division.....	2,100 00
Henderson, F. D., Grad. S.P.S., D.L.S.	2	A	Asst. chief of division.	1,600 00
Burgess, E. L., Grad. S.P.S., D.L.S., O.L.S.	2	A	" "	1,600 00
Dennis, E. M., B. Sc., D.L.S.	2	A	" "	1,600 00
Elder, A. J., Grad. S.P.S., D.L.S.	2	A	" "	1,600 00
Hill, S. N., Grad. S.P.S.	2	A	" "	1,600 00
Elwell, Wm., Grad. S.P.S.	2	A	" "	1,600 00
Cumming, A. L., B. Sc., D.L.S.	2	A	" "	1,600 00
Sutherland, H. E., B. Sc.	2	B	Draughtsman.....	1,100 00
Robertson, D. F., Grad. S.P.S.	2	B	"	1,300 00
Clunn, T. H. G., D.L.S.	2	B	"	1,450 00
Kitto, F. H., D.L.S.	2	B	"	1,200 00
Bonnell, M. B., B.A. Sc.	2	B	"	1,000 00
Norrish, B.E., B. Sc.	2	B	"	900 00
McClennan, W. D.	2	B	"	1,350 00
Roger, A.	2	B	"	1,350 00
Spreckley, R. O.	2	B	"	1,200 00
Goodday, Leonard.	2	B	"	1,100 00
Williamson, F. H. H.	2	B	"	1,100 00
Webb, G. C.	2	B	"	1,100 00
Bray, R. P.	2	B	"	1,100 00
Harrison, E. W.	2	B	"	1,000 09
Ault, H. W.	2	B	"	1,000 00
d'Orsonnens, A.	2	B	"	1,300 00
Stronach, R.S.	2	B	"	1,000 00
Macdonald, J. A.	3	B	Clerk.....	550 00
Vacant.....	2	B	Draughtsman.....	1,000 00
Vacant.....	2	B	"	1,000 00
Vacant.....	2	B	"	1,000 00

SESSIONAL PAPER No. 25

DRAUGHTING OFFICE—THIRD DIVISION.

(Imperial Building, Queen Street.)

COPYING plans for reproduction.

Name.	CLASSIFICATION.		Duties of Office.	Salary.
	Division	Sub-division.		
				\$ cts.
Engler, Carl, B.A., D.L.S.	2	A	Chief of division.....	1,750 00
May, J. E.	2	A	Asst. chief of division.....	1,600 00
O'Connell, J. R.	2	B	Draughtsman.....	1,450 00
Moule, W. J.	2	B	"	1,350 00
Helmer, J. D.	2	B	Clerk.....	800 00
Dawson, R. J.	2	B	"	800 00
Archambault, E.	2	B	"	800 00
Trenblay, A.	3	B	"	750 00
Brown, A.	3	B	"	650 00
Binks, C. R.	3	B	"	600 00
Ebbs, E. J.	3	B	"	500 00
Watters, James.	3	A	Printer.....	1,000 00
Vacant.....	3	B	Clerk	500 00

DRAUGHTING OFFICE—FOURTH DIVISION.

(Metcalf Street, Corner of Slater.)

SUPERVISING British Columbia surveys; preparing instructions; examining the returns and plotting the plans of the surveys.

Rowan-Legg, E. L.	2	A	Chief of division.....	1,750 00
Gillmore, E. T. B., Grad. R. M. C.	2	A	Asst. chief of division	1,700 00
Lawe, H., D.L.S.	2	A	" "	1,600 00
MacIlquham, W. L., B.Sc.	2	A	" "	1,600 00
Morley, R. W.	2	A	" "	1,600 00
Weld, W. E.	2	A	" "	1,600 00
Wilson, E. E. D.	2	B	Draughtsman.....	1,400 00
Osmond, H.	2	B	"	1,000 00
Harris, K. D.	2	B	"	1,000 00

DRAUGHTING OFFICE—FIFTH DIVISION.

(Imperial Building, Queen Street.)

COMPILING sectional maps and township index.

Smith, J.	1	B	Chief of division.....	2,100 00
Begin, P. A.	2	A	Asst. chief of division.....	1,650 00
Genest, P. F. X.	2	A	" "	1,600 00
Lepage, J. B.	2	A	Draughtsman.....	1,600 00
Blanchet, A. E.	2	B	"	1,450 00
Davies, T. E. S.	2	B	"	1,300 00
Perrin, V.	2	B	"	1,300 00
Davy, E.	2	B	"	1,100 00
Flindt, A. H.	2	B	"	1,000 00
Villeneuve, E.	2	B	"	800 00
Bergin, W.	2	B	"	800 00

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DRAUGHTING OFFICE—SIXTH DIVISION.

(Imperial Building, Queen Street.)

PLOTTING topographical plans; examining and plotting returns of levels on base lines;
calculating and recording barometric elevations and magnetic observations;
calculating astronomical field tables; testing and adjusting survey instruments.

Name.	CLASSIFICATION.		Duties of Office.	Salaries.
	Division	Sub-division		
				\$ cts.
Dodge, G. B., D.L.S.....	1	B	Chief of division.....	2,100 00
Vacant.....	2	B	Computer & draughtsman.	1,000 00
Vacant.....	2	B	" "	1,000 00
Vacant.....	2	B	" "	1,000 00
Vacant.....	2	B	" "	1,000 00
Vacant.....	2	B	" "	1,000 00
Vacant.....	2	B	" "	1,000 00
Vacant.....	3	B	Clerk	500 00
Vacant.....	3	B	"	500 00
Vacant.....	3	B	"	500 00
Vacant.....	3	B	"	500 00
Vacant.....	3	B	"	500 00
Vacant.....	3	B	"	500 00

GEOGRAPHER'S OFFICE.

(Wood's Building, Slater Street.)

White, James, F.R.G.S.....	1	A	Chief Geographer.....	3,000 00
Chalifour, J. E.....	1	B	" draughtsman.....	2,100 00
Baine, H. E.....	2	A	Draughtsman.....	1,850 00
Taché, Henri.....	2	A	"	1,600 00
Anderson, W.....	2	A	"	1,600 00
Bryant, E. D.....	2	A	"	1,600 00
Inkster, Fred.....	2	A	"	1,600 00
Beveridge, J.....	2	A	"	1,600 00
Akerlindh, A.....	2	B	"	1,250 00
Darrach, A. M.....	2	B	"	1,100 00
Blatchley, H. M.....	2	B	"	1,050 00
Dumouchel, G. E.....	2	B	"	1,050 00
Grindlay, Thos.....	2	B	"	1,200 00
Wilson, H. W.....	2	B	"	1,050 00
Chandler, S.....	2	B	"	1,000 00
Bennie, J.....	2	B	"	1,000 00
Craig, R. W.....	2	B	"	1,600 00
Groulx, A.....	2	B	"	900 00
Gagnon, J. S.....	2	B	"	900 00
McElligott, J. P.....	2	B	"	800 00
Blue, W. A.....	2	B	"	800 00
Pigeon, J. H.....	2	B	"	800 00
Waite, Mrs. F. E.....	3	B	Clerk	700 00
Martin Miss M. P.....	3	B	Stenographer.....	600 00
Stewart, Miss M.....	3	B	"	500 00
Merrifield, J. R.....	2	B	Messenger.....	750 00
Vacant.....	2	B	Draughtsman.....	800 00

SESSIONAL PAPER No. 25

SURVEY RECORDS OFFICE.

(Canadian Building, Slater Street.)

Name.	CLASSIFICATION.		Duties of Office.	Salary.
	Division	Sub-division		
				\$ cts.
Steers, C. J.	2	A	Clerk in charge	1,700 00
Currie, P. W., B.A., B.Sc., D.L.S.	2	A	First assistant	1,750 00
Surtees, W. S.	2	A	Clerk	1,600 00
Lecourt, Eugene	2	B	Draughtsman	1,550 00
Ashton, A. W., D.L.S.	2	B	"	1,250 00
Gillis, W.C., B.Sc.	2	B	"	1,200 00
Brice, R. E.	2	B	"	1,000 00
Smith, F. W.	2	B	"	500 00
Sowter, T. W. E.	3	A	Clerk	1,100 00
Belleau, Eugène, B.L.	3	A	"	1,100 00
Lambart, O.H.	3	A	"	1,100 00
Yielding, Miss A. B.	3	A	"	1,100 00
Routh, C. T.	3	A	"	900 00
Moore, R. T.	3	B	"	700 00
Landry, Narcisse.	3	B	"	600 00

GEOGRAPHIC BOARD.

(Woods Building, Slater Street.)

Whitcher, A. H., F.R.G.S., D.L.S.	2	A	Secretary	1,900 00
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PHOTOGRAPHIC OFFICE.

(Metcalf Street, Corner of Slater Street.)

Carruthers, H. K.	2	A	Process photographer	1,600 00
Woodruff, John	2	A	Chief	1,600 00
Whitcomb, H. E.	3	A	Photographer	1,000 00
Morgan, W. E.	3	A	"	900 00
Kilmartin, A.	3	B	Asst. photographer	800 00
Devlin, A.	3	B	"	800 00
Quimet, E. G.	3	B	Clerk	700 00

LITHOGRAPHIC OFFICE (Unclassified).

(Metcalf Street, Corner of Slater Street.)

Name.	Occupation.	Salaries.
Moody, A.	Foreman	\$25 00 per week.
Burnett, E.	Lithographer	25 00 "
Thicke, C. R.	"	22 00 "
Deslauriers, J. H.	Transferrer	20 00 "
Bergin, J.	Printer	18 00 "
Thicke, H. S.	"	18 00 "
Boyle, S.	Stone polisher	14 00 "
Gagnon, J.	Press feeder	11 00 "
Kane, P.	"	7 00 "

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APPENDIX No. 11.

List of Dominion Land Surveyors who have been supplied with Standard Measures.

Name.	Address.	Date of Appointment.	Remarks.
Austin, G. F.	Dewdney, Alta.	April 14, 1872	
Aylen, J.	North Bay, Ont.	May 29, 1885	
Aylsworth, C. F.	Madoc, Ont.	" 13, 1886	
Baker, J. C.	Vermilion, Alta.	" 18, 1906	
Baker, M. H.	Maple Creek, Sask.	Aug. 6, 1908	
Barwell, C. S. W.	Dawson, Yukon Territory	" 21, 1864	
Bayre, G. A.	Winnipeg, Man.	April 14, 1872	
Beatty, D.	Parry Sound, Ont.	" 14, 1872	
Beatty, W.	Delta, Ont.	" 14, 1872	
Belanger, P. R. A.	Ottawa, Ont.	May 17, 1889	Inspector of Surveys, Topographical Surveys Branch, Dept. of Interior.
Belleau, J. A.	"	" 15, 1883	Topographical Surveys Branch, Dept. of Interior.
Bigger, C. A.	"	Mar. 30, 1882	Astronomer, Dept. of Interior.
Bingham, E. R.	Fort William, Ont.	Oct. 25, 1906	
Bolton, L.	Listowel, Ont.	April 14, 1872	
Boswell, E. J.	Not known	Mar. 18, 1903	
Bourgeois, A.	St. Jean Port Joli, Que.	" 29, 1883	
Bourgault, C. E.	"	Feb. 21, 1888	
Bourget, C. A.	Levis, Que.	May 14, 1884	
Bowman, H. J.	Berlin, Ont.	Feb. 16, 1888	
Brabazon, A. J.	Ottawa, Ont.	May 13, 1882	
Brady, J.	Golden, B.C.	April 14, 1872	
Bray, S.	Ottawa, Ont.	Nov. 14, 1883	Dept. of Indian Affairs.
Bray, L. T.	Amherstburg, Ont.	Feb. 18, 1903	
Bridgland, M. P.	Calgary, Alta.	Mar. 10, 1905	Topog. Surveys Branch, Dept. of Interior.
Brownlee, J. H.	Victoria, B.C.	April 15, 1887	
Bucknill, W. B.	Vancouver, B.C.	Mar. 19, 1908	
Burke, W.	Minnedosa, Manitoba	April 14, 1872	
Burnet, H.	Ottawa, Ont.	June 22, 1885	
Burwash, N. A.	Whitehorse, Yukon Territory	Mar. 6, 1907	
Burwell, H. M.	Vancouver, B.C.	Feb. 17, 1887	
Campbell, A. S.	Kingston, Ont.	Mar. 6, 1909	
Carbert, J. A.	Medicine Hat, Alta.	May 12, 1880	
Carpenter, H. S.	Regina, Sask.	Feb. 20, 1901	Dept. of Public Works for Saskatchewan.
Carroll, C.	Prince Albert, Sask.	April 14, 1872	
Carson, P. A.	Ottawa, Ont.	Feb. 22, 1906	Topog. Surveys Branch, Dept. of Interior.
Cautley, R. H.	Edmonton, Alta.	May 1, 1905	
Cautley, R. W.	"	Sept. 2, 1896	
Cavana, A. G.	Orillia, Ont.	Nov. 16, 1876	
Charlesworth, L. C.	Edmonton, Alta.	Mar. 24, 1903	Dept. of Public Works, Alberta.
Chilver, C. A.	Walkerville, Ont.	Feb. 22, 1907	
Christie, W.	Chesley, Ont.	Mar. 22, 1906	
Coates, P. C.	Golden, B.C.	April 19, 1907	
Cleveland, E. A.	Vancouver, B.C.	June 27, 1899	
Côté, J. A.	Prince Albert, Sask.	May 14, 1884	
Côté, J. L.	Edmonton, Alta.	Mar. 21, 1890	
Cotton, A. F.	New Westminster, B.C.	May 11, 1880	
Craig, J. D.	Ottawa, Ont.	Feb. 24, 1902	Boundary Surveys, Dept. of Int.
Cummings, A.	Fernie, B.C.	Mar. 3, 1902	
Cummings, J. G.	Calgary, Alta.	Feb. 17, 1904	
Dalton, J. J.	Weston, Ont.	April 17, 1879	Dominion Topographical Surveyor.
Davies, T. A.	Ottawa, Ont.	Feb. 22, 1906	
Deans, W. J.	Brandon, Man.	May 13, 1886	
Dennis, J. S.	Calgary, Alta.	Nov. 19, 1877	Dominion Topographical Surveyor, Inspector of Irrigation and British Columbia Land Commissioner, C.P.R.

SESSIONAL PAPER No. 25

APPENDIX No. 11.

LIST of Dominion Land Surveyors who have been supplied with Standard Measures—*Continued.*

Name.	Address.	Date of Appointment.	Remarks.
Denny, H. C.	Not known	April 1, 1882	
Dickson, H. G.	Whitehorse, Yukon Territory	Mar. 19, 1899	
Dickson, J.	Fenelon Falls, Ont.	April 14, 1872	
Dobie, J. S.	Regina, Sask.	Mar. 22, 1906	Dept. of Public Works for Saskatchewan.
Doupe, J.	Winnipeg, Man.	April 14, 1872	
Doupe, J. L.	"	Oct. 6, 1888	Asst. Land Commissioner, C. P.R.
Drewry, W. S.	New Denver, B.C.	Nov. 14, 1883	
Driscoll, A.	Edmonton, Alta.	Feb. 23, 1887	
Drummond, T.	Montreal, Que.	June 24, 1878	Dominion Topographical Surveyor.
Ducker, W. A.	Winnipeg, Man.	Mar. 30, 1883	Swamp Land Commissioner.
Dumas, P. T. C.	Hull, Que.	" 29, 1882	
Edwards, Geo.	Ponoka, Alta.	April 14, 1872	
Ellacott, C. H.	Victoria, B.C.	Feb. 22, 1899	
Empey, J. M.	Calgary, Alta.	" 23, 1905	
Fairchild, C. C.	Brautford, Ont.	" 20, 1901	
Farncomb, A. E.	Lacombe, Alta.	Mar. 12, 1902	
Fawcett, T.	Niagara Falls, Ont.	Nov. 18, 1876	Dominion Topographical Surveyor.
Fawcett, A.	Gravenhurst, Ont.	Feb. 22, 1893	
Findlay, A.	Winnipeg, Man.	Mar. 21, 1908	
Fontaine, L. E.	Levis, Que.	Nov. 30, 1892	Inspector of surveys, Topographical Surveys Branch, Dept. of Interior.
Foster, F. L.	Toronto, Ont.	April 14, 1872	
Francis, J.	Poplar Point, Man.	June 17, 1875	
Garden, J. F.	Vancouver, B.C.	May 13, 1880	
Garden, G. H.	Lethbridge, Alta.	April 14, 1872	
Garden, C.	Not known	" 14, 1872	
Garner, A. C.	South Qu'Appelle, Sask.	May 27, 1907	
Gauvreau, L. P.	Not known	April 14, 1872	
Gibbons, J.	Dawson, Yukon Territory	Feb. 12, 1891	
Gordon, M. L.	Vancouver, B.C.	" 18, 1904	
Gordon, R. J.	Raymond, Alta.	Mar. 12, 1902	
Gore, T. S.	Victoria, B.C.	April 19, 1879	
Green, A. H.	Nelson, B.C.	Feb. 23, 1905	
Green, T. D.	Prescott, Ont.	May 19, 1884	
Green, W. T.	Ottawa, Ont.	Feb. 22, 1907	Topographical Surveys Branch, Dept. of Interior.
Grover, G. A.	Norwood, Ont.	" 18, 1901	
Harris, J. W.	Winnipeg, Man.	April 14, 1872	
Harvey, C.	Indian Head, Sask.	Feb. 17, 1904	City Surveyor, Winnipeg.
Hawkins, A. H.	Listowel, Ont.	Mar. 6, 1906	
Heathcott, R. V.	Edmonton, Alta.	May 13, 1907	
Henderson, W.	Not known	Nov. 17, 1883	
Holcroft, H. S.	Toronto, Ont.	Feb. 18, 1903	
Hopkins, M. W.	Edmonton, Alta.	" 20, 1901	
Hubbell, E. W.	Ottawa, Ont.	May 19, 1884	Topographical Surveys Branch, Dept. of Interior, President of D.L.S. Association.
James, S.	Toronto, Ont.	April 14, 1872	
Jephson, R. J.	Brandon, Man.	May 12, 1880	
Johnson, A. W.	Kamloops, B.C.	Mar. 12, 1900	
King, W. F.	Ottawa, Ont.	Nov. 21, 1871	Dominion Topographical Surveyor, Chief Astronomer, Dept. of Interior.
Kimpe, M.	Edmonton, Alta.	May 13, 1907	
Kirk, J. A.	Revelstoke, B.C.	" 11, 1888	
Kitto, F. H.	Ottawa, Ont.	Mar. 6, 1908	Topographical Surveys Branch, Dept. of Interior.
Klotz, O. J.	"	Nov. 19, 1877	Dominion Topographical Surveyor, Astronomer, Dept. of the Interior.

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APPENDIX No. 11.

LIST of Dominion Land Surveyors who have been supplied with Standard Measures—Continued.

Name.	Address.	Date of Appointment.	Remarks.
Knight, R. H.	Edmonton, Alta.	Feb. 18, 1904	
Latimer, F. H.	Detroit, Mich.	Nov. 13, 1885	
Laurie, R. C.	Battleford, Sask.	April 27, 1883	
Lawe, H.	Ottawa, Ont.	" 14, 1872	Topographical Surveys Branch, Dept. of Interior.
Lemoine, C. E.	Quebec, Que.	Mar. 31, 1882	
Lendrum, R. W.	Strathcona, Alta.	May 15, 1880	
Loneragan, G. J.	Buckingham, Que.	Feb. 28, 1901	Inspector of Surveys, Topographical Surveys Branch, Dept. of Interior.
Lumsden, H. D.	Ottawa, Ont.	April 14, 1872	Chief Engineer Trans. Ry.
MacPherson, C. W.	Dawson, Yukon Territory.	Mar. 7, 1900	Director of Surveys, Y.T.
Magrath, C. A.	Lethbridge, Alta.	Nov. 16, 1881	Dominion Topographical Surveyor, Member of Parliament.
Meadows, W. W.	Maple Creek, Sask.	Feb. 23, 1905	District Surveyor and Town Engineer.
Miles, C. F.	Toronto, Ont.	April 14, 1872	Inspector of Surveys, Topographical Surveys Branch, Dept. of Interior.
Moberly, H. K.	Innisfail, Alta.	" 21, 1903	
Molloy, J.	Winnipeg, Man.	" 14, 1872	
Montgomery, R. H.	Prince Albert, Sask.	Feb. 23, 1905	
Moore, H. H.	Calgary, Alta.	Feb. 17, 1904	
Morrier, J. E.	Ottawa, Ont.	May 16, 1907	
McArthur, J. J.	Ottawa, Ont.	April 17, 1879	Boundary Surveys, Dept. of Interior.
McColl, G. B.	Winnipeg, Man.	Mar. 20, 1907	Dominion Topographical Surveyor.
McDiarmid, S. S.	Vancouver, B.C.	Feb. 23, 1905	
McFadden, M.	Neepawa, Man.	April 14, 1872	
McFarlane, J. B.	Toronto, Ont.	June 3, 1908	
McFarlane, W. G.	Toronto, Ont.	May 19, 1905	
McFee, A.	Red Deer, Alta.	April 19, 1879	
McGrandle, H.	Weta-kiwin, Alta.	May 30, 1883	
McKenna, J. J.	Dublin, Ont.	April 14, 1872	
McKenzie, J.	New Westminster, B.C.	Nov. 18, 1887	Dominion Lands Agent, New Westminster.
McLean, J. K.	Ottawa, O t.	April, 1, 1882	Dept. of Indian Affairs.
MacLennan, A. L.	Toronto, Ont.	Feb. 23, 1905	
McMillan, G.	Ottawa, Ont.	" 22, 1906	
McPherson, A. J.	Dawson, Yukon Territory.	" 21, 1901	
McPhillips, G.	Winnipeg, Man.	June 17, 1875	
McVittie, A. W.	Blairmore, Alta.	Mar. 30, 1882	
Nash, T. S.	Ottawa, Ont.	Feb. 18, 1904	Topographical Surveys Branch, Dept. of Interior, secretary-treasurer of the D.L.S. Assn.
Ogilvie, W.	Paris, Texas.	April 14, 1872	
O'Hara, W. F.	Ottawa, Ont.	Feb. 19, 1895	
Ord, L. R.	Hamilton, Ont.	April 1, 1882	
Parsons, J. L. R.	Regina, Sask.	Feb. 23, 1905	
Patrick, A. P.	Calgary, Alta.	Nov. 19, 1877	Dominion Topographical Surveyor.
Pearce, W.	Calgary, Alta.	May 10, 1880	
Phillips, E. H.	Saskatoon, Sask.	Feb. 24, 1902	Dept. of Public Works for Saskatchewan.
Plunkett, T. H.	Meaford, Ont.	Mar. 12, 1908	
Ponton, A. W.	Macleod, Alta.	May 18, 1881	
Pondfoot, H. B.	Saskatoon, Sask.	Mar. 28, 1882	
Rainboth, E. J.	Ottawa, Ont.	May 19, 1881	
Rainboth, G. C.	Aylmer, Que.	April 14, 1872	Boundary Surveys, Dept. of Interior.
Reid, J. L.	Ottawa, Ont.	" 14, 1872	Dept. of Indian Affairs.
Reilly, W. R.	Regina, Sask.	Nov. 17, 1881	
Richard, J. F.	Ste. Anne de la Pocatière, Que.	May 13, 1882	
Rinfret, R.	Quebec, P.Q.	Feb. 20, 1900	
Ritchie, J. F.	Nelson, B.C.	Jan. 7, 1889	

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APPENDIX No. 11.

List of Dominion Land Surveyors who have been supplied with Standard Measures - *Concluded.*

Name.	Address.	Date of Appointment.	Remarks.
Robertson, H. H.	Not known	April 14, 1872	
Roberts, S. A.	Victoria, B.C.	May 16, 1885	
Roberts, V. M.	Sturgeon Falls, Ont.	" 17, 1886	
Robinson, E. W.	Victoria, B.C.	" 1, 1908	
Robinson, F. J.	Regina, Sask.	Feb. 20, 1900	Dept. of Public Works for Saskatchewan.
Rolfson, O.	Walkerville, Ont.	July 11, 1908	
Romhough, M. B.	Morden, Man.	April 14, 1872	
Rorke, L. V.	Toronto, Ont.	Aug. 13, 1891	
Ross, G.	Welland, Ont.	Nov. 21, 1882	
Ross, J. E.	Kamloops, B.C.	Feb. 12, 1891	
Roy, G. P.	Quebec, Que.	Nov. 17, 1881	
Saint Cyr, J. B.	Montreal, Que.	Feb. 17, 1887	
Saint Cyr, A.	Ottawa, Ont.	" 1, 1887	
Saunders, B. J.	Edmonton, Alta.	Nov. 16, 1884	
Scott, W. A.	Galt, Ont.	Mar. 19, 1909	
Seagar, E.	Kenora, Ont.	April 14, 1872	
Selby, H. W.	Toronto, Ont.	Nov. 15, 1882	
Seymour, H. L.	Edmonton, Alta.	Feb. 22, 1906	
Sewell, H. de Q.	Toronto, Ont.	May 16, 1885	
Shaw, C. A. E.	Victoria, B.C.	" 10, 1880	
Shopley, J. D.	Maple Creek, Sask.	Mar. 12, 1906	
Smith, C. C.	Ottawa, Ont.	Feb. 22, 1906	Dominion Observatory, Dept. of Interior.
Speight, Thos.	Toronto, Ont.	Nov. 16, 1882	
Starkey, S. M.	Starkey's P. O., N.S.	April 14, 1872	
Steele, I. J.	Ottawa, Ont.	" 16, 1908	
Stewart, G. A.	Calgary, Alta.	" 14, 1872	
Stewart, L. B.	Toronto, Ont.	Nov. 22, 1882	Dominion Topographical Surveyor, Professor of Surveying, School of Practical Science.
Stewart, E.	Montreal, Que.	April 14, 1872	
Stewart, W. M.	Hamilton, Ont.	June 6, 1907	
Talbot, A. C.	Calgary, Alta.	May 13, 1880	
Taylor A.	Not known	June 9, 1904	
Teadale, C. M.	Concord, Ont.	Mar. 9, 1906	
Thompson, W. T.	Fort Qu'Appelle, Sask.	Nov. 19, 1877	Dominion Topographical Surveyor.
Tracy, T. H.	Vancouver, B.C.	April 14, 1872	
Trenblay, A. J.	Les Eboulements, Que.	Feb. 18, 1890	City Engineer, Vancouver.
Turnbull, T.	Winnipeg, Man.	Mar. 29, 1887	
Tyrell, J. W.	Hamilton, Ont.	Feb. 16, 1887	
Vaughan, J. W.	Vancouver, B.C.	June 11, 1878	
Vicars, J.	Kamloops, B.C.	May 17, 1886	
Waddell, W. H.	Hamilton, Ont.	Mar. 25, 1907	
Waldron, J.	Moosejaw, Sask.	April 2, 1907	
Walker, E. W.	Regina, Sask.	Mar. 27, 1907	Dept. of Public Works for Saskatchewan.
Wallace, J. N.	Calgary, Alta.	Feb. 20, 1900	
Warren, J.	Walkerton, Ont.	April 14, 1872	
Watt, G. H.	Prince Albert, Sask.	Feb. 24, 1902	
Weekes, A. S.	Edmonton, Alta.	" 11, 1892	
Weekes, M. B.	Regina, Sask.	" 18, 1903	Dept. of Public Works for Saskatchewan.
Wheeler, A. O.	Calgary, Alta.	Nov. 21, 1882	
White-Fraser, G. W. R.	Ottawa, Ont.	Feb. 21, 1888	Topographer of the Department of the Interior.
Wiggins, T. H.	Saskatoon, Sask.	" 18, 1896	
Wilkins, F. W.	Norwood, Ont.	May 18, 1881	Dominion Topographical Surveyor.
Wilkinson, W. D.	Not known	Feb. 22, 1893	
Williams, G. L.	Vancouver, B.C.	June 24, 1907	
Woods, J. E.	Frank, Alta.	Nov. 14, 1885	
Young, W. B.	Winnipeg, Man.	Mar. 25, 1905	
Young, W. H.	Lethbridge, Alta.	May 17, 1907	

PART V

DOMINION PARKS

DOMINION PARKS

REPORT OF THE COMMISSIONER OF DOMINION PARKS.

DEPARTMENT OF THE INTERIOR,

BANFF, ALBERTA, July 15, 1909.

To the Honourable FRANK OLIVER,
Minister of the Interior,
Ottawa, Ont.

SIR,—I have the honour to submit herewith my first annual report as commissioner of Dominion parks for the fiscal year ending March 31, 1909.

It is a source of very great pleasure to me to be able to report that with each succeeding year the popularity of Canada's western recreation grounds is increasing with rapidity that has far exceeded the most sanguine expectations of those who a few years ago saw the immense possibilities of these parks as a pleasure and health resort. The usefulness of these parks is becoming more and more recognized as they become better known, and their future development and expansion will, it is expected, be much more rapid than in the past. The remarkable growth of interest manifested in these charming resorts is not only very marked in the increasing number of temporary summer visitors and tourists, but in the rapidly increasing numbers of permanent residents in the town of Banff. The presence of an up-to-date school of three rooms in charge of a competent staff of teachers and fully equipped with modern educational facilities, is having the effect of inducing many families to take up their residence in Banff for a part of each year.

During the past ten years there has been an increase of almost five hundred per cent in the number of visitors to the different mountain parks, as may be seen by the comparative figures compiled for each year since 1899, which are as follows :—

Year.	No. of Visitors.
1899.....	7,389
1900.....	6,533
1901.....	8,456
1902.....	8,516
1903.....	10,696
1904.....	11,752
1905.....	17,605
1906.....	30,136
1907 (9 months).....	288,735
1908.....	32,209
1909.....	39,780

In the above figures I have not included the very large number of persons who visit the parks on excursions for a day and who do not register at the hotels, &c. Among the visitors were people from almost every country of the world, no less than forty-five different nationalities being represented last year. I may say that every one of them has gone away charmed and delighted with the scenic wonders of Canada's national parks.

During the past year the parks were visited by an unusually large number of British, eastern Canadian and American press associations and delegations consisting of many of the leading magazine and newspaper writers in those countries. On their return home well-written leading articles descriptive of the grandeur of the mountains,

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valleys, waterfalls, caves and other wonders which they saw, made known to hundreds of thousands of their readers that Canada has beauty spots to make men happy as well as fertile plains to make them wealthy.

They were also particularly impressed with the cosmopolitan character of the people met at the different resorts in the park. One of them, an extensively travelled and leading newspaper writer of New York, remarked: 'Between New York and Shanghai, where I spent five years, there is no spot more cosmopolitan than the rotunda of the Canadian Pacific Hotel at Banff.' After noting some of the men that he had met in far distant parts of the world and whose acquaintance he had renewed on his visit to Banff, he said: 'The women in this group of people in the rotunda of the hotel are dressed as attractively as any women in any hotel in the world, and when the orchestra plays and the people move about talking to each other I could imagine myself in Buenos Ayres, in Bombay, in Melbourne, in Malta, in Cape Town or in any other city in which the currents of world traffic come together.'

The tide of travel for the season of 1909 has commenced in an unprecedented volume, and already the accommodation of the parks is taxed to its utmost limit, and judging from present indications it is confidently expected that it will be almost double in volume that of any former year. This is due in a great measure to the crowds of people from eastern Canada, the eastern and New England states who are visiting the Alaska-Yukon Exposition at Seattle, and are taking advantage of the opportunity of seeing the magnificent scenery of the Canadian mountains, either on their going or homeward trip. A very large percentage of these stop off for a day or two and many of them for a longer period at some of the resorts in the mountain parks. The task of providing for the comfort and accommodation of so many of these pleasure-seekers, in addition to the regular number of visitors and tourists, necessarily involves a large amount of extra work for the staff at each park.

THE TOWN OF BANFF.

The town of Banff, the business centre of the Rocky Mountains Park and the chief objective point for tourists, is an up-to-date little town of close to one thousand permanent residents, which is generally increased to about fifteen hundred during the summer months by temporary residents who either own or lease cottages which they occupy from two to six months each year.

Eight excellent hotels and six livery barns well supplied with saddle horses and carriages cater to the tourist and other trade for trips to the many points of interest to which roads and trails lead from the town. Outfitting stores of all kinds furnish supplies to the residents or camping parties at reasonable prices.

The town is supplied with all modern utilities in the way of electric light, water and sewer systems, telephone exchange connected with the Alberta government long-distance telephone system, churches, schools, fraternal societies, athletic and social clubs, &c.

The principal streets are all well graded and gravelled, but a large amount of work is required to be done each year in keeping up new streets where new houses are being built, extending to water and sewer system, regrading streets which are torn up by the extension of the water works and sewer system.

OTHER IMPROVEMENTS IN THE PARK.

In addition to the large amount of necessary work done last year in the maintenance and repair of the roads and trails in the town of Banff and other parts of the park a considerable amount of new work was undertaken. In the town about a mile of street was regraded and gravelled and a cinder path constructed from the Bow River bridge to the Banff Springs Hotel, a distance of about three-quarters of a mile.

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Six miles of new road was constructed between Canmore and Exshaw, to facilitate communication by rigs between those two points. This new road will also form a part of the proposed coach road from Calgary to Banff, on its part of which the provincial government of Alberta is doing a considerable amount of work each year. It is expected that the road for this entire distance will be completed in another year and made passable for all kinds of vehicles.

Three miles of road were built as an extension of the road from Laggan to Moraine lake in the valley of the Ten Peaks. It is hoped to have the remaining three miles of this road to the lake completed this year.

With the additions made during the past year there are now in operation and in a good state of repair nearly eighty miles of carriage road at Banff, nineteen miles at Laggan, and thirty-five miles at Field.

I am glad to be able to report that notwithstanding the greatly increased travel over them there has not been a single serious accident or any unnecessary delay on any of them.

THE MUSEUM AND GROUNDS.

The number of visitors to the museum as shown by the report of the curator (which is appended), continues to increase each year and is one of the chief attractions of the park. The different specimens of the big game, the smaller mammals, the fish and bird-life, the flora and minerals of the park are proving a continued source of interest to the lay visitor as well as to the student of natural science. Its educative value in enabling the visitors to classify the different specimens of plants and rocks which they find in their tours is greatly appreciated, so much so that an appreciative visitor styled it 'The University of the Hills.'

To the younger generation of the visitors the mounted specimens of wild animals, birds and insects and the caged live animals are a source of great interest and delight. The additions to the specimens last year included the head of an elk which was killed in a fight with another elk, some birds, &c.

The wild animals confined in the new cages have been in perfectly good health and condition during the year, and have taken very kindly to their enforced captivity in their new homes and appear to enjoy their comfortable and clean environments. The animals confined in them at present are :—

Black bear....	1
Brown bear..	1
Cinnamon bear....	1
Mountain lions....	1
Timber wolves....	2
Coyotes....	2
Kit fox....	3
Red fox....	2
Lynx....	2
Racoons....	2
Badgers....	2
Marmots....	2

During the year a considerable amount of work was done on the grounds to make it more convenient and comfortable for visitors to see the animals in captivity. This included the completion of a gravelled drive around the grounds, a cinder path between and around the cages, fencing, levelling, draining and filling low ground, &c.

THE SULPHUR BATHS.

The revenue from the baths at the Cave and Basin continues steadily to increase and the number of bathers who enjoyed their beneficent and curative waters during the past year was greatly in excess of that of any previous year since the baths were opened. This was the case, notwithstanding the growing popularity of the baths at the Hot Springs.

In my report of last year I drew your attention to the inadequacy of the accommodation at the Cave and Basin for the swarms of bathers who patronize it especially during the months of July and August. Intending bathers have in many cases every day during those months to wait for a considerable length of time before they can secure a dressing room.

At the Hot Springs baths the lack of sufficient accommodation is even more apparent. At no season of the year can the number of bathers be satisfactorily accommodated and during the hot summer months large numbers of intending bathers are, owing to the lack of accommodation, unable to secure baths.

The erection of a large up-to-date bath-house at the Hot Springs, equipped with all the latest modern conveniences is imperative if the baths are to continue to increase in popularity, as no doubt they will. In my opinion the revenue would increase in proportion to the expenditure and be a good paying investment for the department.

It may be of interest to the public to reproduce the report of the analyst of the Canadian government, who says officially :—

‘The water is free from organic impurities and gives no albuminoid nitrogen. Each gallon contains dissolved sulphuretted hydrogen to the amount of 0.3 grains (equivalent to 0.8 cubic inch).

‘The dissolved solids are as follows :—

‘Chloride (in chlorides).... .	6.42 grains.
‘Sulphuric acid (SO ₃)... .	38.50 “
‘Silica (SiO ₂)... .	2.31 “
‘Lime (CaO)... .	24.85 “
‘Magnesia (Mg)... .	4.87
‘Alkalis (as Soda, Na ₂ O)... .	0.62 “
‘Lithium	a decided trace.

‘The temperature of the spring is 114.3 degrees Fahrenheit.’

During the year a large number of complete and permanent cures of diseases, especially of rheumatism and other blood diseases, were reported as a result of the curative qualities of the Banff sulphur water baths.

ANIMALS IN THE PADDOCKS.

The animals in the paddocks at Banff continue to be one of the most popular of the attractions in the park and the caretaker's register shows a largely increased number of visitors each year. Especial interest is taken by them in the herd of buffalo, as being the relics of the countless monarchs of the plains, which but for the action of the Interior Department of the government of Canada would have been doomed to total extinction.

That there has not been a large natural increase during the year is accounted for by the fact that the paddock in which they are inclosed has become entirely too small for such a large herd and the animals are too much crowded for successful breeding. It is my intention during this year to have the majority of them removed to one of the large buffalo parks, leaving about twenty-five or thirty head at Banff. This number will be quite sufficient for the purpose for which the animals are kept at Banff

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The small increase in the number of the other animals is due almost entirely to the destruction of their young by coyotes and wolves. A wire inclosure to keep out these carnivorous and destructive animals will be built during the year, which will ensure the protection of the young animals from their enemies. It is only by experience that the best way of caring for wild animals in such partial captivity and under such circumstances can be learned and this appears to me to be the best way of protecting them.

It is with regret that I have to report the death of 'Sir Donald,' the patriarch of the buffalo herd, whose tragic end occurred early in March, he having been gored to death by a number of young buffalo bulls.

For several years it had been the intention to preserve and take the best of care of 'Sir Donald' as a matter of scientific historical interest in ascertaining the longevity of the buffalo race. For that reason he was cared for until he became too decrepit from age to care for himself. When he was attacked by the younger bulls and knocked down, he was helpless to defend himself and the aged hero was gored and trampled beyond recognition, in which condition he was found next morning. There is not the slightest doubt but that 'Sir Donald' was the last specimen of the buffalo that a few years ago roamed the prairie at will in their wild free state. He was captured as a buffalo calf by the Indians in 1872 and was consequently in his thirty-eighth year at the time of his death. His history during his thirty-seven years of captivity has been one of romantic interest to thousands of people as the sole survivor of a noble type of animals, that in their wild state have become only a memory to Indians, buffalo hunters and old-time white pioneers.

Shortly after his capture he was sold by the Indians to Mr. James McKay, then chief factor for the Hudson's Bay Company at Fort Garry, and afterwards became a part of and headed the herd of Sir Donald A. Smith (now Lord Strathcona) at Silver Heights. In 1898 Lord Strathcona donated the remnant of his herd, consisting of thirteen animals, among which was 'Sir Donald,' to the National Park at Banff, to be cared for as the wards of the Canadian government.

It had been intended to have the skin preserved and mounted as a whole specimen for the new national museum at Ottawa, but unfortunately his carcass was so gored and disfigured beyond recognition that this was impossible. The head has, however, been preserved and is now being mounted and will serve in a measure as a memento of the last and noblest specimen of the buffalo of the by-gone days.

The animals now in the paddocks are as follows :—

Buffalo..	107	Increase..	14
Moose..	21	"	3
Elk..	15	"	3
Mule deer..	11		
Persian sheep..	3		
Angora goats..	6		
Virginia deer..	4		

The only antelope in the paddock was killed during the year by another deer.

THE COAL MINES.

The coal mines at Bankhead and Canmore have been in operation for almost full time during the year and the companies report a largely increased output over any former year in their history.

The capacity of the briquetting plant at Bankhead has been almost doubled owing to the rapidly increasing demand, and briquette bricks are largely used for steam purposes on the Western Division of the Canadian Pacific Railway. The Bankhead coal is the only anthracite coal found in western Canada.

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The high pressure air lines have been extended further into the mines and additional charging stations are being installed for the motors used in hauling the newly mined coal to the breakers. New workings are being driven north and south from the new slope below the tunnel level and the force of miners is being continually increased. As a consequence of this development and the employment of so many men in the mines, the town is in a prosperous condition and is rapidly increasing in size and population.

Considering that so many foreigners are employed, law and order are well observed and there is very little cause of complaint on this score.

At Canmore a new shaft, which almost doubles the capacity of the mines, was opened during the year about three miles east of the old shaft and the coal is mined from it.

A ready market is always available for the increasing tonnage mined owing to the fact that the Canadian Pacific Railway Company has contracted ahead for the total output of the mines. Canmore coal is considered the best steam coal on the entire Canadian Pacific Railway system and is largely used on the locomotives between Medicine Hat and Revelstoke.

PRESERVATION OF GAME AND TIMBER.

At the last session of parliament provision was made for the employment of three game and fire wardens and for combining the duties in connection with the protection of game and the prevention of forest fires in the Rocky Mountains Parks. These appointments have been made and the new wardens will enter on their duties with the beginning of the fiscal year.

They will patrol all portions of the parks and regular patrol trails and small cabins will be constructed in different portions of the parks where the men can remain over night and avoid the necessity of packing tents, &c., with them. Each will be furnished with a saddle pony and a pack pony carrying supplies, so that they can remain out for several days at a time or as long as their patrol duty in any locality may require. By this means it is hoped that the killing of game by the Indians and tourists, which in the past was not of uncommon occurrence in the outlying portions of the parks owing to insufficient patrol, may be checked if not altogether prevented.

The adoption of the proposed new regulations prohibiting the carrying of unsealed firearms by persons within the limits of the parks should also have a beneficial effect in the way of minimizing the temptation to shoot and kill game in the park.

The wild animals appear to be increasing in numbers, and the regulation prohibiting dogs running at large within the parks will doubtless have the effect of making the animals less timid at the approach of mankind and less fearful of their mortal enemies, dogs and guns.

The question of the prevention of forest fires in the parks is also very serious, and one which causes a great deal of anxiety, especially during the dry months of July and August. During the past year the expense in connection with fighting forest fires was much greater than in former years, but this additional expense was counterbalanced many times over by the saving from destruction of large quantities of fine valuable timber. The instituting of a systematic patrol and the adoption of more stringent regulations in respect to the care of camp-fires by tourists should have the effect of greatly reducing the danger from this source and assist us in the effort to preserve the forests of the parks in the state of primeval nature which is one of their chief charms.

THE ALPINE CLUB OF CANADA.

The Canadian Alpine Club, the headquarters of which is at Banff, was permanently organized three years ago and has at present a membership of over five hundred, among whom are numbered some of the most distinguished and enthusiastic mountain climbers in the world.

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A very successful camp was held last year, and under the able direction of Mr. A. O. Wheeler, F.R.G.S., president of the club, a number of difficult ascents, as far as known never previously attempted, were successfully accomplished. At the camp of last year all the leading alpine clubs of Europe and American were represented by experienced and ardent scalers of mountain peaks.

Membership in the club is divided into five grades: Honorary, consisting of persons distinguished in mountaineering, exploration or research; associates, who may be active members or may not but who contribute twenty-five dollars to the club's treasury; active members, who have made an ascent of at least ten thousand feet in some recognized alpine region or who have contributed to Canadian alpine literature by scientific publications based on personal experience; and grading members, who are given two years to qualify as active members.

Funds have been raised for the erection of a commodious up-to-date club-house at Banff, for the accommodation of the executive and members, which will be completed in time for the annual meeting of the club in July, 1909. The site selected is on the slope of the Sulphur mountain, near the middle hot springs and commands a magnificent view of the town of Banff, the Bow river and valley and of the surrounding mountains.

The club-house and tents to be erected by the club will furnish comfortable and commodious accommodation for over seventy-five persons.

It is also the intention of the club to build during the coming summer a smaller club-house at Lake O'Hara and later on houses in different localities in the park.

The scope of the work of the club is not confined entirely to climbing mountains during the summer camps, but to stimulate the members to do all in their power to promote the extension of knowledge of the scenic and other wonders to be found only in the Canadian Rockies and Selkirk mountains.

REVENUE OF THE PARK.

In my report of last year attention was drawn to the steady and continuous increase in the revenues of the park from nearly every source, and to the fact that the increase in appropriations by parliament for the extension of new work has not kept pace with the increase of revenue. It was estimated last year that over one and a quarter millions of dollars were spent in Canada by the tourists from foreign countries who visited the Rocky Mountains Parks, and it is expected that this amount will be almost, if not quite, doubled during the season of 1909.

The value of the parks as an asset of the Dominion of Canada cannot be measured by immediate results in dollars and cents, but they have been the means of spreading the fame and beauty of Canada to parts of the world where it otherwise would have been unheard of. Hundreds of visitors have said that they were induced to visit the Rocky Mountains Park through reports of its beauties given by tourists who had been there in former years. Its benefit to the Dominion of Canada, as a whole, as an advertising medium in the Department of Immigration alone, is of inestimable value, and it is doubtful if equal results for the money expended could be secured by any other means. Every additional dollar of expenditure on the national parks in the way of building and improving trails, carriage roads, bridges, &c., for the opening up of new points of interest and for making those already opened up more accessible, would, in my opinion, be money well invested and return a hundredfold in benefit to the country.

YHOHO PARK.

During the past year about three miles were added to the carriage road up the Yoho valley leading to Takakkaw falls. In this were the most difficult portions of the road, including considerable heavy rock work and a couple of switch-backs put in to

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make the grade of the ascent easier. From the summit of the second switchback a magnificent view of the river valley below and Cathedral mountain in the back ground is obtained. From this point it is intended as soon as possible to construct a foot-path through the undergrowth to the river canyon about one hundred yards distant, and to have a number of rustic seats placed for the convenience and accommodation of tourists who will avail themselves of the opportunity of visiting this wonderful view. The narrow canyon is over one thousand feet deep, walled in on either side by almost perpendicular rock walls. Tourists from all parts of the world have pronounced this valley one of the most beautiful they had ever seen and the carriage road one of the best of mountain roads. When the remaining three and a half miles of extension to the falls is completed (which we hope to have done early in August) the drive will be one of the pleasantest and most beautiful in the entire Rocky Mountains Parks and cannot fail to prove of annually increasing popularity.

The Takakkaw Falls, themselves one thousand four hundred and sixty feet in height, are among the wonders of the world, far surpassing in grandeur, if not in volume of water, the famed Niagara Falls or the falls of the Yellowstone Park. Where necessary the road has been gravelled and a great many small bridges built across the small streams that rush down the mountain sides from the glaciers above. The completion of the Yoho valley carriage road will overcome the arduous climb over the summit on the trail from Emerald lake to the falls.

The right of way for a carriage road from the Emerald lake road to the natural bridge over the Kicking Horse river, two miles in length, was cleared during the year and the work of grading the road will be commenced on the completion of the Yoho valley road.

This natural wonder is about three miles from Field and at present is reached only by a foot-path, and the construction of a carriage road will afford visitors an opportunity of visiting this beautiful spot over a short and pleasant driveway.

In addition to this, considerable repair work was done on the Emerald lake and Ottertail carriage roads, in cleaning out culverts and ditches, rendered necessary by the spring snow and mud slides which are usual in all mountain regions. These roads were kept in good condition from their opening up in the spring until they were closed for the winter and necessarily entailed considerable labour and expense.

Repairs were also made to the pack trail from Hector station to Lake O'Hara along the valley of Cataract creek. The opening up and making easy of access of these new places of interest in the Yoho Park is having the effect of largely increasing the number of tourists who spend some time at the different resorts as may be seen by the records of the registers at the different hotels in another part of this report.

GLACIER PARK.

At Glacier Park most of the new work outlined in my report of last year was undertaken, in addition to the repair work which is necessary to maintain the trail from Glacier House, which suffers every year from slides. At the Caves, the ladders at the more dangerous places in the descent were replaced by wooden stairways and railings, the lumber for which was packed on ponies from the railway to the Caves. This improvement was deemed necessary in order that accidents to nervous visitors might be averted and to make access to the Caves easier by all classes of people. During the year over one thousand people visited and explored the Caves, and every one returned enchanted with the wonders they had seen in these quaint rock caverns eaten out by the water action of centuries.

The Cascade trail and the Asulkan Valley trail are also becoming very popular with tourists who linger for a few days at the Glacier House and wish to make easy excursions among the beautiful scenery in that vicinity.

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To the more ambitious the ascents of Mounts Abbott and Sir Dona'd offer ample opportunity for the powers of the most ardent mountain climbers.

I hope during the coming year to complete the trail mentioned in my report of last year connecting the trail from Rogers Pass to the head waters of Bear creek with the end of the present trail at the Caves. This will make a good trail for the round trip of about fifteen miles from Glacier House at a comparatively small cost, which will be of great interest and pleasure to tourists.

ELK ISLAND PARK.

Elk Island Park, with an area of sixty-four square miles, is located along the Canadian Northern Railway at Lamont Station, about forty miles east of Edmonton, in the Beaver Hills.

This park was originally acquired by the Alberta provincial government as a forest and game preserve. When the first and second shipments of buffalo were made from Montana in 1907 there was no other place to put them, consequently permission was obtained from the provincial government to range them in this park until such time as a larger and more suitable range could be acquired by the Dominion government. These two shipments numbered four hundred and ten head and have since temporarily ranged in the Elk Island Park.

When I was appointed commissioner of Dominion parks in 1908, this park was placed under my jurisdiction, but it is the intention during the present year to remove the buffalo to the new Buffalo Park which will be their future home, leaving about thirty-five head in the Elk Island Park to serve as the nucleus of another herd.

There are also in the park a considerable number of elk and deer, it being the natural home of these animals; when the fence was built they were inclosed in the park.

BUFFALO PARK.

The new Buffalo Park reserved by the Dominion government in 1907 as a grazing range contains four hundred and thirty square miles. It is located in townships 42, 43 and 44, ranges 6, 7, 8 and 9 west of the fourth principal meridian on the Grand Trunk Pacific Railway about one hundred and twenty miles east of Edmonton. The northern end of the park is within one-half mile of Wainwright, a railway divisional point and the southern boundary three miles from Rosyth station, on the Wetaskiwin branch of the Canadian Pacific Railway.

During the past year one hundred and ten thousand acres of Buffalo Park has been inclosed by a fourteen-strand wire fence, seventy-three miles in length, with two cross fences forming inclosures for the buffalo during the breeding season. The new park is a magnificent stretch of rolling prairie and numerous small lakes giving it a park-like appearance, and is in every respect an ideal place for the purpose to which it has been devoted. The large number of buffalo bones and skulls, buffalo wallows, and other evidence of their former occupancy found on it prove it to have been a favourite grazing ground for the herds of buffalo when in the wild state.

Besides the lakes, which furnish abundance of water for the animals, the Battle river passes through the western portion and Ribstone creek through the eastern part of the park. The banks of both streams are well wooded and form an excellent protection for the animals from the heat of summer and the storms of winter. The area inclosed at present is considered sufficient for the support of from five thousand to seven thousand head of buffalo. Hay is found in abundance in the eastern portion of the park and can be put up in stacks at a cost not exceeding from \$2 to \$2.50 per ton. In this item alone there will be a saving of several thousand dollars in favour of Buffalo Park as compared with Elk Island Park. This guarantees the maintenance of the buffalo at the lowest possible cost to the government.

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A fire-guard twenty feet in width has been ploughed around the inclosure, besides two cross fire-guards across the park. These were made with a view to not only protect the park from all danger of fire from without, but eventually to serve a double purpose of a carriage driveway around the park without entailing any extra expense to the department. It is also intended to move about eighty head of the buffalo now in the Rocky Mountains Park to Buffalo Park during the summer, where they will have freer range and better accommodation. Buildings for the accommodation of the caretaker's horses, &c., will be erected at Wainwright and also at the eastern end of the park where the animals will be wintered.

With the removal of the buffalo from Elk Island Park, the shipments yet to come from Montana and the surplus buffalo at Banff, there will be at least seven hundred head of buffalo in the herd before the close of the coming summer.

The cost of caring for the animals will be very small, as only about three men will be required in summer and five in winter.

With the expected annual natural increase of the herd of from one hundred and fifty to two hundred calves from the commencement, instead of the buffalo being an expense to the government they should prove a considerable source of revenue and be more than self-sustaining, as from the very start the surplus male stock can be readily disposed of at good prices.

The park being located near the main line of the Grand Trunk Transcontinental Railway, and near the point from which the branch to Calgary leaves the main line of the Grand Trunk Pacific Railway, thousands of visitors will be attracted to Buffalo Park each year to see the largest herd of buffalo in the world.

JASPER PARK.

I have as yet been unable to officially visit the Jasper Park—the latest addition to Canada's magnificent system of national park reserves—containing five thousand four hundred and fifty square miles of as yet almost entirely unexplored territory. I intend, however, to make a trip to this park during the month of August of this year, when I shall be able to report more fully upon it.

The only available recent information in regard to this park is obtained from a report of a trip made in 1908 through this territory by Mrs. Charles Schaffer, of Philadelphia, Pa., a celebrated botanist and traveller, who has been a regular annual visitor to the Canadian national parks for the past seventeen years. Mrs. Schaffer devotes the winter to lecturing on the results of her exploratory trips to remote parts of the Canadian Rockies and Selkirk ranges before scientific and literary associations in the leading cities of the United States. She has done more than any other living person in making known and arousing interest in the floral and other natural attractions of these regions for scientific research.

Mrs. Schaffer's report to me of her trip is as follows:—

'During the summer of 1908, a party of six, composed of Mr. Stewardson Brown, Botanist of the Academy of National Sciences, Philadelphia; Miss Adams, of New Haven, Connecticut; three guides and myself, left Laggan, Alberta, for an extended trip into the little-known hills lying to the north. Our outfit consisted of twenty-two horses with food sufficient (about two thousand pounds) for a four months' sojourn in a land where game though plenty is quite uncertain.

'We had two objects in view: Mr. Brown to make a more exhaustive study of the flora of the higher altitudes, Miss Adams and myself to search for a lake whose existence had been reported to us the year before by a Stony Indian.

'Our one guiding star was a decidedly dim one, a crude map drawn by the Indian, a grown man at the time: his sketch was from his memory when, as a small boy, he visited it with his father on a hunting expedition.

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'The first part of our trail lay for seventy-five miles through the National Park. The date of departure being June 8, we were forced, owing to its lower altitude, to use the Bow Pass, reaching it via Bow river and lakes. Though I have now travelled many hundreds of miles between Laggan and the Yellowhead Pass, this valley, near home, stands pre-eminent as the worst section for muskag I have known. A partially constructed trail on the hill-side cancels a good deal of the explorer's trouble, but there are several miles still left through which to plough. From the Bow across Nigel Pass, then down a branch of the Brazeau to the outlet of Brazeau lake was an old story; from then on, the ground to be travelled was new. After crossing Pobocton Pass and traversing a goodly portion of the creek of the same name, all other maps than the Indian's ceased to be anything but a blank.

'The scenery, however, continued to be wild and beautiful, growing more interesting as we advanced. One or two valleys were penetrated on foot to see if the lake could be located. Finally, in the beginning of our third week from Laggan, we crossed a short pass of about seven thousand feet elevation and gazed down on one of the fairest grass-covered, flower-strewn valleys I have seen in the Canadian Rocky range.

'After traversing it for three days, our second in command climbed to a height of eight thousand feet and returned about 10.30 p.m. to report that the lake was at the terminus of the green valley.

'The following day we reached the shores of our long-sought goal. Plenty of feed was found for the horses a half mile back from the lake. A raft was soon constructed which carried tents, bedding and food for three days, and those most interested pushed for the head of the lake.

'Later developments proved the stretch of water to be about twenty miles long. At the outlet a fire a few years ago destroyed about one-quarter of a mile of timber, otherwise the slopes from tree line to shore are covered with a dense growth of spruce and pine. This growth is so heavy it is not only impracticable to take horses to the head of the lake, but even should they reach there there seems to be no grass for them.

'We found several fine peaks at the head of the lake, the conditions of the snow and ice proclaiming them between ten thousand and twelve thousand feet high. Glaciers swept down almost to the water's edge and at one place from a ragged rock precipice plunged a ribbon of water. In its thousands of feet fall, it was lost in spray. I think without exception it is one of the most beautiful sections I have ever visited, and the lake is undoubtedly the largest one yet recorded in the Rocky range. The outlet is comparatively a narrow one and looks quite harmless, but experience proved, at least during high water, that no horse could stem the flow with pack or saddle.

'Later investigation proved that this river empties into Medicine lake and from there as Maligne river flows into the Athabaska river, almost opposite to the mouth of the Miette river, which has its source in the Yellowhead Pass. Hence we have called the short pass, the stream flowing from it to the lake, the green valley, the lake itself and one of the peaks Maligne. Being but a matter of thirty to thirty-five miles south of the line of the advancing Grand Trunk Pacific road, it will undoubtedly at some future day become a famous resort for the lover of the beautiful.

'Since writing the above short sketch I have learned that the government has set aside 5,400 square miles (with Jasper House as a centre) of land as a national park. I can but trust that for the sake of the beauty of the lake, its almost unblemished forest and the game, Maligne lake may pass under the care of a government whose foresight and generosity to future lovers of the wild have been equalled by no other nation.

'MRS. CHARLES SCHAFER.'

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THE MONTANA HERD OF BUFFALO.

In connection with the balance of the shipment of buffalo purchased in 1907 from Michel Don Pablo, of Missoula, I have to report that owing to unforeseen and uncontrollable circumstances, we were unable to accomplish our purpose of having them transferred to Canadian soil during the year just closed.

Owing to sickness in his family and his own serious illness, Mr. Pablo was unable to commence the round-up of the animals until late in the season. I urged that operations should be started earlier, but it was not until my second visit to Montana in August that a move could be made. After several weeks of strenuous work we succeeded in gathering together in the corral one hundred and twenty of the animals preparatory to driving them thirty-six miles to be loaded on the train at Ravalli. On the night following their being corralled the enraged animals stampeded, climbed the high, almost perpendicular clay cut-bank at the rear of the inclosure and escaped to their native homes among the mountains of the Flathead reservation.

As it was getting late in the season and the early snows were falling in the mountains, which would render the difficulties in the way of again collecting the frightened animals insurmountable, we decided to abandon the attempt until the following spring. We were also induced to take this course, owing to the fact that after their recent exhausting struggle and flight for freedom, the animals were in very poor condition for shipment such a long distance so late in the season.

For the unsuccessful round-up, Mr. Pablo was at several thousands of dollars of expense for supplies, wages of men, &c., besides having a number of his horses disabled, for which he will not receive one cent of remuneration. He, however, acted throughout the whole affair in a perfectly honest and straightforward manner, and faithfully promised that as soon as the snow was off the ground sufficiently to allow of the animals being rounded up he would start his men to work. He is very anxious that his contract for the delivery of the entire herd to the Canadian government shall be carried out with as little delay as possible.

The result of our operations this year has been very disappointing to him and also to myself, as I had confidently expected this year to see the work of landing the buffalo at their future home in Buffalo Park on Canadian soil, reach a successful conclusion. I have every hope, however, that this will be successfully accomplished early in the next fiscal year.

Since the above was written, I am glad to be able to report that the first shipment consisting of one hundred and ninety head, one hundred and seventeen of which were young females, has been successfully landed in Buffalo Park, and the remainder, of about one hundred and twenty head, will be shipped early in the summer.

A new plan for transferring them from the corral to the loading pens was devised. Instead of the animals being driven in a herd they were transported individually in wagons over the thirty-six miles to Ravalli for loading. Experienced spectators of the work expressed their surprise and wonder at the magnitude of the task of rounding-up, transporting in wagons to the loading station and shipping over almost thirteen hundred miles of railway, such a large number of these wild, untamed animals and landing them successfully and safely in their new homes. The undertaking involved a vast amount of work, anxiety and expense, and it is doubtful whether a similar enterprise of rescuing from threatened extermination a once noble and numerous type of animal, was ever before undertaken.

A fuller and more detailed report of the shipments will be made in my next year's report, when I hope to be able to congratulate the government of the Dominion of Canada on having safely secured in its Buffalo Park reserve, the largest herd, not only of buffalo but of any wild animals in one inclosure, in the world.

In conclusion I desire to express my appreciation of the support which I have at all times received from the department in furthering the development of the Canadian

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national parks, and especially in the matter of securing the buffalo which would at times have been so discouraging as to suggest the abandoning of the undertaking entirely had I not been assured of the hearty support and co-operation of the Honourable Minister and every one connected with the department in the work.

I also wish to acknowledge the valuable services rendered by the members of the Royal Northwest Mounted Police in maintaining law and order in the different parts of the national parks where they were stationed.

I have the honour to be, Sir,

Your obedient servant,

HOWARD DOUGLAS,

Commissioner of Dominion Parks.

APPENDICES.

VISITORS AT HOTELS.

Number of visitors registered at the Banff Springs Hotel from April 1, 1908, to April 1, 1909 :—

Canada.....	2,318
United States.....	4,082
England.....	384
Australia.....	62
Scotland.....	50
India.....	28
Japan.....	56
China.....	46
France.....	24
Honolulu.....	18
Ireland.....	37
New Zealand.....	64
Switzerland.....	3
Mexico.....	1
Norway.....	7
Italy.....	5
Holland.....	6
Denmark.....	4
Chili.....	2
Total.....	<hr/> 7,197 <hr/>

Number of visitors registered at the Mount Royal Hotel from April 1, 1908, to April 1, 1909 :—

Canada.....	1,240
United States.....	482
England.....	64
Scotland.....	22
Ireland.....	18
New Zealand.....	10
Australia.....	6
Italy.....	4

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China..	4
Germany...	2
Switzerland...	2
India..	1
Total...	1,955

Number of visitors registered at the Sanitarium Hotel from April 1, 1908, to April 1, 1909 :—

Canada...	6,018
United States...	1,490
England...	152
Scotland...	86
Ireland...	42
Japan...	43
New Zealand...	72
Denmark...	16
Australia...	80
India...	8
China...	26
Holland...	10
Germany...	27
Chili...	14
Italy...	18
Switzerland...	41
Portugal...	16
Korea...	4
France...	14
Austria...	2
Philippine Islands...	31
South Africa...	28
Total...	8,238

Number of visitors registered at the Hotel King Edward, from April 1, 1908, to April 1, 1909.

Canada...	4,284
United States...	1,282
England...	94
Scotland...	43
Ireland...	78
Switzerland...	6
New Zealand...	59
Australia...	28
South Africa...	1
Japan...	13
India...	4
Germany...	4
Austria...	4
China...	11
Total...	5,911

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Number of visitors registered at the Hot Springs Hydropathic Hotel, from April 1, 1908, to April 1, 1909 :—

Canada.....	792
United States.....	204
England.....	22
Scotland.....	18
New Zealand.....	9
Germany.....	6
Australia.....	9
Ireland.....	11
Japan.....	6
Total.....	1,077

Number of visitors registered at the Alberta Hotel from April 1, 1908, to April 1, 1909 :—

Canada.....	4,340
United States.....	1,622
England.....	238
Scotland.....	209
Ireland.....	107
Sweden.....	22
New Zealand.....	69
Australia.....	20
China.....	28
India.....	2
South Africa.....	1
Germany.....	6
Total.....	6,664

Number of visitors registered at the Grand View Villa, Banff, from April 1, 1908, to April 1, 1909 :—

Canada.....	1,120
United States.....	322
England.....	46
Japan.....	2
India.....	9
Ireland.....	22
China.....	10
Scotland.....	28
Australia.....	13
Switzerland.....	1
Ceylon.....	3
Holland.....	4
New Zealand.....	11
France.....	3
Total.....	1,594

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SUMMARY.

Banff Springs Hotel.....	7,197
Mount Royal Hotel.....	1,955
Sanitarium.....	8,238
Hotel King Edward.....	5,911
Hot Springs Hydropathic.....	1,077
Alberta Hotel.....	6,664
Grand View Villa.....	1,594
Park Hotel.....	1,500
Excursionists not registered.....	3,684
Cottagers.....	1,960
Total.....	39,780

Number of visitors at the Cave and Basin, from April 1, 1908, to April 1, 1909:—

Canada.....	4,105
United States.....	3,302
England.....	203
Scotland.....	93
Ireland.....	7
New Zealand.....	49
Australia.....	25
New South Wales.....	7
South Africa.....	11
India.....	5
Ceylon.....	2
China.....	11
Japan.....	5
France.....	7
Germany.....	10
Sweden.....	8
Holland.....	4
Total.....	7,854

Number of visitors at the Upper Hot Springs, from April 1, 1908, to April 1, 1909:—

United States and Canada.....	14,032
Newfoundland.....	2
England.....	151
Scotland.....	53
Ireland.....	28
Australia.....	46
South Africa.....	4
India.....	2
Hawaiian Islands.....	2
Germany.....	6
China.....	8
Japan.....	4
Denmark.....	14
Sweden.....	2
Total.....	14,355

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Number of visitors registered at the Chalet, Lake Louise, Laggan, from April 1, 1908, to April 1, 1909:—

Canada.....	1,904
United States.....	4,028
England.....	402
Scotland.....	68
Ireland.....	14
Japan.....	2
Russia.....	9
France.....	3
Cuba.....	5
Australia.....	32
India.....	9
Holland.....	16
China.....	4
New Zealand.....	38
Honolulu.....	9
Denmark.....	2
Jamaica.....	1
Germany.....	43
Poland.....	1
South America.....	2
Sweden.....	9
Switzerland.....	12
Africa.....	1
Italy.....	22
Alaska.....	4
Belgium.....	6
South Anchoia.....	1
Hawaii.....	9
Total.....	6,656

List of visitors at the Mount Stephen House, Field, from April 1, 1908, to April 1, 1909:—

United States.....	1,922
Canada.....	2,019
British Isles.....	486
Australia.....	64
New Zealand.....	96
Germany.....	29
India.....	6
Japan.....	1
China.....	14
South America.....	6
France.....	9
Switzerland.....	38
Hungary.....	6
Hawaii.....	9
South Africa.....	6
Holland.....	14
Italy.....	18
Denmark.....	2
Jamaica.....	1
Sweden.....	9
Tasmania.....	9
Belgium.....	6
Total.....	3,770

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MUSEUM.

REPORT OF THE CURATOR.

ROCKY MOUNTAINS PARKS OF CANADA,
BANFF, ALBERTA, July 2, 1909.

HOWARD DOUGLAS, Esq.,
Commissioner of Dominion Parks,
Banff, Alberta.

SIR,—As will be seen by the attached list of visitors for the twelve months there has been a decided increase.

Additions.—Two young cariboo heads and a few birds collected by myself, as well as a number of birds' eggs have been added to the museum; also a collection of sponges, shells, corals, &c., from the Bahama Islands, and garnets from Alaska was donated by Mr. A. C. Talbot, of Calgary. The former, although not in the collecting grounds, are most interesting. Promises of loans and donations are becoming more numerous but do not always materialize.

Work done.—The collection of insects is being rapidly added to, and I have to thank Dr. E. M. Walker, of the Biological Section of Toronto University, for giving much help in naming orthoptera and odonta; Dr. L. O. Howard, the eminent chief of the entomological branch of the Department of Agriculture, Washington, D.C., and his expert assistants for valuable assistance in naming specimens in the orders hymenoptera, diptera, coleoptera, hemiptera, &c.; also the Experimental Farm Entomological Branch for much assistance in naming lepidoptera and other orders.

Suggested improvements.—As soon as at all possible the mammals of the park should be completed and represented in the museum by full sized specimens. Many common animals are not yet on exhibition, and to make the best specimens these should be taken in the fall, winter or early spring.

The mineral collection should be made more complete by additional specimens from the neighbourhood, as also from British Columbia and New Ontario.

Some method of displaying the maps received from the Geological Survey Department would be of advantage as they prove most interesting as well as useful and instructive to many of the visitors.

Any addition to the Indian collection would be money well invested, as the day for procuring these things will soon be past. I may say that nearly all the visitors are very much interested in the display of Indian work now on loan. It might be well to purchase the Reverend Canon Stocken's collection, which I understand he is desirous of selling at a reasonable price.

Many useful and interesting pamphlets are now in my possession relative to museum work, &c., which, to be of more use for the purpose of reference, should be placed in a suitable book case and catalogued.

As usual, I have during the past year named many plants for visitors and also given much other information.

I append the weather report for the past year.

I am, Sir,

Your obedient servant,

N. B. SANSON,
Curator.

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Visitors at the Museum, from April 1, 1908, to April 1, 1909 :—

Canada.....	6,450
Yukon Territory.....	18
Newfoundland.....	2
United States.....	2,221
England.....	432
Scotland.....	197
Ireland.....	42
South Wales.....	3
Wales.....	1
Isle of Man.....	1
Channel Islands.....	
Australia.....	84
New South Wales.....	4
New Zealand.....	97
South Africa.....	4
Zululand.....	1
Orange River Colony.....	4
Germany.....	47
The Hague.....	1
Holland.....	16
Belgium.....	18
China.....	24
Thibet.....	1
Italy.....	7
India.....	10
France.....	19
Norway.....	7
Austria.....	22
Japan.....	19
Sweden.....	12
Russia.....	7
South America.....	4
Switzerland.....	28
Denmark.....	14
Total.....	9,817

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METEOROLOGICAL TABLES

ROCKY MOUNTAINS PARK.

MAXIMUM and Minimum Temperatures and the General State of the Weather between
July 1, 1908, and June 30, 1909.

Date.	THERMOMETER READINGS.		Weather.
	Maximum for day.	Minimum for day.	
1908.	°	°	
July 1....	77.1	38.2	Fair; very fine day.
" 2....	78.0	39.7	Cloudy; thunder; rain.
" 3....	67.4	44.0	Cloudy; squally wind.
" 4....	58.7	42.8	Cloudy; light rain; river high and muddy; lightning.
" 5....	63.9	37.2	Fair; fine day.
" 6....	71.6	36.3	Fair.
" 7....	77.4	40.0	Fair; very fine day.
" 8....	77.4	43.3	Fair.
" 9....	67.5	60.4	Cloudy; squally wind.
" 10....	77.4	48.8	Fair; perfect day.
" 11....	81.7	43.7	Fair; perfect day; campanula in flower.
" 12....	69.6	44.7	Cloudy; fine day; cirro-stratus and cirrus clouds.
" 13....	68.0	52.8	Cloudy; rain.
" 14....	67.3	52.8	Cloudy; strawberries abundant.
" 15....	75.9	47.2	Fair; perfect day; river very high.
" 16....	71.6	45.2	Cloudy; light rain; lightning; Shepherdia in fruit.
" 17....	76.1	48.8	Fair; light rain; asters in flower; thunder and lightning.
" 18....	76.6	42.2	Fair; fine day.
" 19....	78.1	55.0	Fair.
" 20....	84.4	41.0	Fair; very fine day; many insects.
" 21....	87.5	42.3	Fair; very fine day; forest fire.
" 22....	86.5	44.9	Fair; forest fire; very fine day.
" 23....	73.4	50.0	Cloudy; rain; thunder and lightning; forest fire out.
" 24....	77.5	49.6	Fair.
" 25....	69.2	48.0	Cloudy; rain; fine sunset.
" 26....	65.5	37.6	Fair; very fine day.
" 27....	70.8	33.5	Fair; forest fire.
" 28....	53.8	41.3	Cloudy; rain; thunder and lightning.
" 29....	69.4	35.0	Fair; very fine day.
" 30....	79.0	39.8	Fair; very fine day.
" 31....	84.5	42.9	Fair; very fine day; smoke from forest fire.
Aug. 1....	80.2	43.0	Fair; rain; thunder and lightning.
" 2....	68.0	46.0	Fair; very fine day.
" 3....	69.5	50.6	Cloudy.
" 4....	78.4	44.0	Fair; fine sunset; forest fire still burning.
" 5....	81.2	46.3	Fair; very fine day; large cumulus clouds over fire, &c.; rivers, &c., dropping.
" 6....	78.4	44.8	Fair; brilliant meteor, noise in bursting; very fine day, but dense smoke.
" 7....	76.2	43.3	Fair; light rain.
" 8....	81.1	36.2	Fair; very fine day; fire bad in afternoon.
" 9....	79.4	40.0	Fair; smoke from forest fire about.
" 10....	68.4	43.9	Fair.
" 11....	51.2	43.9	Cloudy; rain; forest fire nearly out.
" 12....	64.2	39.9	Fair; light rain; forest fire up again.
" 13....	66.5	33.1	Fair; fine day.
" 14....	76.1	32.2	Fair; aurora; very fine day.
" 15....	76.4	44.8	Fair; fine day.
" 16....	70.0	47.1	Fair.
" 17....	82.0	36.0	Fair; very fine day.

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MAXIMUM and Minimum Temperatures, &c.—Continued.

Date.	THERMOMETER READINGS.		Weather.
	Maximum for day.	Minimum for day.	
1908.	°	°	.
Aug. 18. . . .	77.0	44.0	Fair; very fine aurora; very fine day.
" 19.	84.7	42.0	Fair; very fine day.
" 20.	73.4	43.5	Fair; thunder; much smoke from fire.
" 21.	71.4	43.5	Fair; very fine day.
" 22.	77.4	37.5	Fair; very fine day.
" 23.	66.5	38.6	Cloudy; rain; thunder and lightning; forest fire out.
" 24.	62.0	45.6	Cloudy.
" 25.	47.1	37.8	Cloudy; rain.
" 26.	54.1	38.7	Cloudy; fine sunset.
" 27.	62.4	32.2	Fair; light rain.
" 28.	59.3	42.1	Fair.
" 29.	58.3	43.3	Cloudy.
" 30.	55.8	36.0	Cloudy; rain; very fine rainbow.
" 31.	62.2	35.4	Fair.
Sept. 1. . . .	66.9	38.2	Fair.
" 2.	62.0	50.2	Cloudy; rain.
" 3.	63.4	45.7	Fair.
" 4.	69.3	45.8	Fair; fine sunrise; very fine day.
" 5.	73.2	46.2	Fair; aurora; very fine day.
" 6.	76.7	40.2	Fair; very fine day.
" 7.	62.9	46.6	Cloudy; rain; heavy thunder and vivid lightning.
" 8.	53.1	38.3	Cloudy; light rain.
" 9.	53.0	40.3	Cloudy; very squally chinook kind of wind.
" 10.	67.4	49.4	Fair; very fine day.
" 11.	73.4	36.0	Fair; very fine day.
" 12.	75.4	34.7	Fair; very fine day; brilliant aurora.
" 13.	75.4	37.9	Fair; very fine day and night; sheet lightning.
" 14.	70.0	44.0	Fair; light rain; fine sunrise.
" 15.	55.8	40.7	Cloudy; rain.
" 16.	48.8	42.6	Cloudy; rain.
" 17.	62.5	39.9	Fair; few butterflies still about; very fine afternoon.
" 18.	54.3	35.9	Cloudy; heavy dewfall.
" 19.	61.5	44.0	Fair; heavy dewfall.
" 20.	65.4	53.3	Fair; very fine day and night.
" 21.	64.2	45.7	Fair; fine sunrise; squally wind.
" 22.	50.7	37.3	Fair; fine day; squally wind.
" 23.	42.8	27.3	Cloudy; rain and snow; geese flying over town.
" 24.	32.3	27.0	Cloudy; light snow; snow on mountains.
" 25.	40.3	18.0	Fair; cool but fine day.
" 26.	41.4	18.0	Cloudy; fine sunrise.
" 27.	54.0	33.9	Cloudy.
" 28.	55.4	29.8	Cloudy.
" 29.	58.4	38.5	Cloudy; squally chinook kind of wind; ducks flying east; fine sunset.
" 30.	64.6	29.8	Fair; very fine day; fine sunrise and sunset; vanessa antiopa butterflies.
Oct. 1. . . .	53.9	38.2	Cloudy; heavy rain; fine sunrise.
" 2.	38.0	34.3	Cloudy.
" 3.	53.3	26.9	Fair; very fine day; aurora; few insects about.
" 4.	57.4	24.0	Fair; light rain; few moths and other insects.
" 5.	50.4	38.8	Cloudy.
" 6.	52.9	29.0	Fair; fine day.
" 7.	60.2	33.9	Fair; very fine day.
" 8.	64.6	33.1	Fair; very fine day and night.
" 9.	49.3	36.6	Cloudy; trees becoming leafless.
" 10.	61.0	35.2	Fair; very fine day.
" 11.	59.4	25.3	Fair; very fine day.
" 12.	59.0	26.8	Cloudy; fine day.
" 13.	47.3	37.9	Cloudy; rain.
" 14.	36.2	32.0	Cloudy; snow; patches of snow on ground.
" 15.	39.3	23.6	Cloudy; patches of snow on ground.
" 16.	37.6	24.6	Cloudy.
" 17.	39.1	18.2	Fair.
" 18.	40.9	24.2	Cloudy; fine sunrise; few birds still about.

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MAXIMUM and Minimum Temperatures, &c.—*Continued.*

Date.	THERMOMETER READINGS.		WEATHER.
	Maximum for day.	Minimum for day.	
1908.			
Oct. 19...	34.7	30.1	Cloudy; snow; about 5.25 in. of snow on ground; few sleighs out; grosbeaks.
" 20....	34.1	25.9	Cloudy; longspurs on way south.
" 21....	34.2	21.7	Fair; fine day.
" 22....	34.1	14.9	Cloudy.
" 23....	41.9	17.4	Fair; skating on ponds; no sleighing.
" 24....	42.9	31.7	Fair.
" 25....	44.7	22.3	Fair; fine sunrise; fine day; redpolls.
" 26....	52.2	27.2	Fair; chinooking.
" 27....	30.3	24.9	Cloudy.
" 28....	14.3	9.8	Cloudy; snow; very stormy all day; sleighing but bad; duck flying south.
" 29....	21.1	6.5	Cloudy; Bow river frozen over in places; sleighing but bad.
" 30....	46.3	16.0	Cloudy; no sleighing.
" 31....	43.3	35.8	Fair; aurora; fine day.
Nov. 1....	48.2	24.7	Fair.
" 2....	49.1	38.2	Fair; rain.
" 3....	55.1	42.7	Cloudy; very light rain; very squally; dry warm wind.
" 4....	58.4	49.7	Fair; very squally wind; fine warm day.
" 5....	54.2	46.8	Fair; squally wind all day and night; fine and warm.
" 6....	51.2	41.7	Fair; very squally wind; fine and warm.
" 7....	49.7	41.3	Fair; squally wind; fine and warm day; aurora.
" 8....	34.3	20.8	Fair; very fine day.
" 9....	28.8	17.7	Fair.
" 10....	21.5	7.6	Fair; heavy hoar frost; river frozen over above boat house.
" 11....	20.0	-1.7	Fair; river frozen over; about 5 inches thick.
" 12....	20.0	-3.4	Fair.
" 13....	32.4	10.1	Fair.
" 14....	31.2	7.0	Fair.
" 15....	33.8	13.1	Fair; very squally wind late afternoon and through midnight.
" 16....	39.2	26.2	Cloudy; very light rain; thaw; very squally wind; river ice becoming unsafe.
" 17....	35.9	32.7	Cloudy; rain; large flock snowbirds.
" 18....	43.6	33.5	Cloudy; light rain and snow; very squally wind; river open in places.
" 19....	42.4	32.7	Cloudy; squally wind.
" 20....	42.0	34.3	Cloudy; rain with snow at night.
" 21....	36.4	31.4	Cloudy; brilliant meteor.
" 22....	36.3	28.7	Fair.
" 23....	34.2	23.8	Cloudy; fine sunset.
" 24....	32.3	23.3	Cloudy.
" 25....	28.6	21.2	Cloudy.
" 26....	26.0	12.8	Fair; fine day.
" 27....	28.2	13.8	Fair; Bow river partly frozen over.
" 28....	34.8	25.0	Cloudy; fine sunrise; squally wind.
" 29....	31.2	7.0	Cloudy; light snow.
" 30....	5.2	-7.8	Fair; Bow river all frozen over; good skating.
Dec. 1....	8.3	-14.0	Fair; heavy hoar frost; only about $\frac{1}{4}$ inch snow on ground.
" 2....	15.0	-1.1	Fair; fine sunset; squally wind.
" 3....	17.3	0.3	Fair; fine sunset; very fine day.
" 4....	25.0	7.8	Cloudy; mostly patches of snow on ground.
" 5....	30.7	18.9	Cloudy; fine sunset.
" 6....	25.8	9.3	Fair; very fine day.
" 7....	27.2	15.5	Fair.
" 8....	27.2	8.7	Cloudy.
" 9....	30.3	24.0	Fair; light snow.
" 10....	24.0	2.0	Fair; fine day.
" 11....	30.6	18.7	Cloudy; very squally wind; light snow.
" 12....	34.3	25.8	Cloudy; squally wind; snow.
" 13....	31.2	26.6	Cloudy; squally wind; about 6 inches snow on ground; sleighing but bad.
" 14....	25.2	15.0	Fair; fine day.
" 15....	20.0	2.9	Fair; fine day.
" 16....	10.1	-9.2	Fair; fine day.

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MAXIMUM and Minimum Temperatures, &c.—*Continued.*

Date.	THERMOMETER READINGS.		WEATHER.
	Maximum for day.	Minimum for day.	
1908.	°	°	
Dec. 17....	20·8	-12·0	Fair; fine day; very fine sunrise and sunset.
" 18....	23·2	11·7	Fair; squally cold wind; very fine sunset; waxwings and grosbeaks.
" 19....	25·0	11·1	Cloudy; very squally wind.
" 20....	19·3	11·8	Fair; squally wind.
" 21....	21·2	8·3	Fair; very fine sunrise and sunset; squally wind.
" 22....	22·2	8·7	Cloudy.
" 23....	26·8	12·7	Fair.
" 24....	25·0	19·4	Cloudy; squally wind; fine sunrise.
" 25....	32·0	19·7	Cloudy; snow; about 13 inches snow on ground.
" 26....	28·3	21·2	Cloudy; sleighing good.
" 27....	31·0	24·2	Cloudy.
" 28....	33·1	23·6	Cloudy; snow.
" 29....	13·3	-0·8	Fair; fine day; loud reports of frost through midnight; mostly calm all day.
" 30....	-11·4	-27·6	Fair; Lake Minnewanka frozen over; calm all day.
" 31....	-8·8	-33·8	Fair; mostly calm all day.
1909.			
Jan. 1....	12·1	-16·8	Fair; very squally wind; snow drifting.
" 2....	17·2	8·0	Cloudy; snow; squally wind; snow drifting.
" 3....	1·9	-10·2	Cloudy; heavy snow; very gusty wind; snow drifting much.
" 4....	-16·6	-20·4	Cloudy; squally wind; about 20 inches of snow on ground.
" 5....	-18·6	-46·0	Fair; fine sunset; mist from river obscuring near objects
" 6....	-15·6	-27·8	Cloudy; squally cold wind.
" 7....	-30·0	-45·0	Fair; mostly calm all day; light snow; much mist rising from river.
" 8....	-25·0	-47·0	Fair; mountains veiled in mist 5 p. m.
" 9....	-21·2	-35·9	Fair; parhelia.
" 10....	-22·4	-44·9	Fair; very bright clear day and calm.
" 11....	-6·0	-29·8	Fair.
" 12....	-4·0	-12·9	Cloudy; squally wind.
" 13....	-10·7	-24·2	Cloudy; squally wind.
" 14....	-12·4	-26·7	Fair; mostly calm all day.
" 15....	18·0	-1·5	Cloudy; snow; squally wind.
" 16....	34·2	24·8	Cloudy; squally wind; ice on river about 19 inches.
" 17....	31·0	22·7	Cloudy; snow.
" 18....	29·8	24·7	Cloudy; light snow.
" 19....	30·0	21·3	Cloudy; snow; snow changing to rain about 10 p.m.
" 20....	31·1	23·7	Fair.
" 21....	28·1	14·3	Cloudy; snow.
" 22....	23·7	2·6	Cloudy; snow; about 20 inches of snow on ground.
" 23....	19·9	-8·2	Cloudy; snow-flurries.
" 24....	23·9	9·4	Cloudy.
" 25....	27·0	13·2	Cloudy; light snow; ice cutting on Bow river.
" 26....	28·3	21·0	Cloudy; chinooking; ice on Bow river 26 inches.
" 27....	33·2	17·6	Cloudy; snow; a gale.
" 28....	9·3	-13·4	Fair; about 22 inches of snow on ground.
" 29....	14·9	-21·4	Fair; loud reports from frost early morning; squally wind.
" 30....	26·7	8·0	Fair; squally wind; fine mild day.
" 31....	33·0	19·4	Cloudy.
Feb. 1....	36·2	20·8	Cloudy; light rain and snow; thaw.
" 2....	38·7	25·8	Cloudy.
" 3....	39·0	32·3	Cloudy; thaw; very light rain; very heavy snow-storm 10 p.m.
" 4....	28·3	14·3	Cloudy; light snow.
" 5....	26·3	7·3	Fair.
" 6....	8·4	-0·8	Cloudy; squally wind; snow drifting.
" 7....	-9·8	-14·5	Cloudy; very squally, cold wind; light snow; loud reports frost upheaving.
" 8....	0·3	-32·1	Fair; fine sunset.
" 9....	21·4	-14·3	Fair; fine day.
" 10....	7·0	-6·9	Cloudy; light snow; very squally wind afternoon and through midnight.
" 11....	-14·8	-20·2	Cloudy; snow; very squally wind; stormy.
" 12....	-4·9	-33·7	Fair; calm all day; comparatively warm in sun.

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MAXIMUM and Minimum Temperatures, &c.—Continued.

Date.	THERMOMETER READINGS.		Weather.
	Maximum for day.	Minimum for day.	
1909.			
Feb. 13....	- 3.3	-38.0	Fair; mostly calm; fine sunset.
" 14....	19.3	-25.3	Cloudy; squally wind.
" 15....	29.0	16.3	Cloudy; snow flurries.
" 16....	34.1	23.1	Cloudy; light snow.
" 17....	37.3	28.2	Cloudy; fine sunset; squally wind.
" 18....	37.3	26.8	Cloudy; ice on Bow river 25 inches thick.
" 19....	32.2	20.6	Cloudy.
" 20....	29.8	9.8	Fair; ice on Lake Minnewanka 23 inches; fine sunrise.
" 21....	29.1	- 5.3	Fair; very fine day; mostly calm all day.
" 22....	25.0	5.8	Fair; snow in woods about 23 inches deep.
" 23....	28.7	9.5	Cloudy; squally wind.
" 24....	33.5	22.1	Cloudy; thaw; light snow evening.
" 25....	38.0	28.0	Fair; thaw.
" 26....	34.2	27.3	Cloudy; squally wind.
" 27....	34.3	24.3	Cloudy.
" 28....	30.1	18.9	Cloudy; light snow.
Mar. 1....	32.4	14.0	Cloudy.
" 2....	32.2	24.6	Fair; very squally wind.
" 3....	43.7	17.9	Fair; thaw.
" 4....	41.2	24.6	Cloudy; light snow; fine sunset.
" 5....	30.4	11.2	Fair.
" 6....	31.4	- 5.9	Fair; very fine day; mostly calm all day.
" 7....	32.0	- 4.0	Fair.
" 8....	34.8	18.5	Fair; snow.
" 9....	33.2	10.3	Fair; light snow.
" 10....	26.2	- 4.9	Fair; mostly calm day.
" 11....	37.2	11.2	Cloudy.
" 12....	29.6	24.0	Cloudy; snow.
" 13....	44.0	12.3	Fair; thaw; 20 inches of snow on ground.
" 14....	41.0	30.2	Cloudy; mostly calm all day; thaw.
" 15....	46.0	13.8	Fair; fine day; fine sunset; thaw.
" 16....	47.2	20.0	Fair; thaw.
" 17....	34.2	27.8	Cloudy; light snow; small flies appearing.
" 18....	34.8	13.0	Fair.
" 19....	37.0	21.7	Cloudy; red winged blackbird; crow.
" 20....	32.7	12.3	Fair; light snow; mostly calm all day; aurora.
" 21....	33.2	11.2	Cloudy; sleighing becoming bad; some wheels in use.
" 22....	36.9	7.3	Cloudy; aurora; fine sunset.
" 23....	45.8	10.8	Fair; very fine day; sleighing bad; thaw.
" 24....	47.0	16.4	Fair; very fine day; thaw.
" 25....	42.2	32.3	Fair; very gusty wind; chinooking; robin.
" 26....	38.6	16.6	Cloudy.
" 27....	42.2	26.8	Cloudy; mostly calm all day; light rain and snow.
" 28....	29.0	19.0	Cloudy.
" 29....	39.2	8.4	Fair.
" 30....	44.3	26.1	Fair.
" 31....	45.2	35.4	Cloudy; Bow river open in places.
April 1....	36.3	18.3	Cloudy; light snow.
" 2....	35.2	15.7	Fair; snow flurries; fine sunrise.
" 3....	33.8	12.2	Fair; snow flurries; aurora.
" 4....	33.0	6.6	Fair; very fine sunrise; mountain bluebirds.
" 5....	34.8	15.9	Cloudy; light snow; juncos.
" 6....	33.2	9.3	Fair; thaw.
" 7....	42.6	5.9	Fair; fine day; sleighing on sheltered roads; fine sunset.
" 8....	47.3	21.3	Fair; fine sunrise.
" 9....	48.3	30.2	Cloudy; light snow; river rising.
" 10....	38.2	28.1	Fair.
" 11....	35.6	18.5	Cloudy; wild geese about.
" 12....	30.4	14.8	Cloudy; Bow river mostly open; light snow.
" 13....	33.6	19.8	Cloudy; snow flurries; golden-eye duck.
" 14....	36.3	12.9	Cloudy; snow.
" 15....	39.1	25.4	Cloudy; snow; thaw.
" 16....	33.0	25.2	Cloudy; light snow; no sleighing
" 17....	36.3	13.0	Fair; fine day but cold wind; hawks.

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MAXIMUM and Minimum Temperatures, &c.—Continued.

Date.	THERMOMETER READINGS.		Weather.
	Maximum for day.	Minimum for day.	
1909.	°	°	
April 18....	43·6	11·8	Fair; Bow river open.
" 19....	41·0	14·9	Cloudy; light snow.
" 20....	33·0	19·0	Cloudy; anemone, patens variety, in flower; snow flurries.
" 21....	42·3	18·8	Cloudy; juncos.
" 22....	44·2	18·6	Cloudy; snow flurries; robins numerous.
" 23....	41·3	21·2	Cloudy.
" 24....	55·2	33·8	Cloudy.
" 25....	45·1	34·0	Cloudy; light snow; sharpshined hawks.
" 26....	42·2	22·9	Cloudy.
" 27....	39·0	25·9	Cloudy; light snow.
" 28....	27·4	24·8	Cloudy; light snow; gusty wind morning; horned larks.
" 29....	33·9	13·9	Fair; snow mostly in patches.
" 30....	41·3	13·0	Cloudy; grebe.
May 1....	52·8	28·7	Fair; fine afternoon; thaw; petasites partly in flower.
" 2....	61·5	29·3	Cloudy; very fine and warm wind; ants out; vanessa milberti.
" 3....	64·5	32·5	Cloudy; very fine and warm wind; strong wind; frogs piping.
" 4....	52·3	35·1	Cloudy; rain; squally wind; belted kingfisher; catkins on aspen poplars.
" 5....	41·1	21·9	Cloudy; squally wind.
" 6....	43·0	30·7	Cloudy; gull.
" 7....	49·3	20·4	Fair; fine day.
" 8....	52·1	21·8	Fair; American merganser; swallow.
" 9....	57·3	22·9	Fair; ruby crowned kinglet; yellow throat warbler; Brewer's blackbird.
" 10....	54·4	34·9	Cloudy; light rain; white crowned sparrows; chipping sparrows; osprey, nuthatch, sparrow hawk, grouse drumming; grass green; anemones plentiful; shepherdia Canadensis in flower; swallows, bees, water insects, midges, mosquitoes, ground bees; vanessa antiopa; Audubon's warbler.
" 11....	39·1	33·7	Cloudy; light rain and snow.
" 12....	50·2	29·9	Fair; fine day.
" 13....	42·2	32·2	Cloudy; snow and light rain; bright aurora.
" 14....	52·4	23·3	Fair; heavy hoar frost.
" 15....	39·1	30·8	Cloudy; snow; Swainson's leucosticte.
" 16....	36·2	28·2	Cloudy; squally wind; yellow throat warbler.
" 17....	42·2	28·1	Cloudy; light rain and snow; song sparrow.
" 18....	53·9	30·8	Cloudy; mostly calm all day; aurora.
" 19....	57·8	26·0	Fair; aurora.
" 20....	52·7	31·5	Cloudy; light rain; mostly calm.
" 21....	48·1	30·4	Cloudy; rain; olive backed thrush; Calypso borealis.
" 22....	48·2	37·9	Cloudy; Arctostaphylos Uva-Ursi in flower.
" 23....	52·1	37·8	Cloudy; rain; primula mistassinica in flower.
" 24....	63·5	38·7	Cloudy; light rain; aurora; lycena butterfly.
" 25....	63·5	37·0	Fair; rain; thlaspi Orvense in flower; river rising.
" 26....	59·6	34·6	Cloudy; river rising; robins building; fly catchers.
" 27....	57·9	35·3	Cloudy; rain; fine afternoon.
" 28....	61·8	39·9	Cloudy; anemone parviflora; dodocatheon meadia; viola fragaria glauca in flower; adunea.
" 29....	56·4	38·9	Cloudy; light rain.
" 30....	61·0	37·2	Fair; very squally wind.
" 31....	67·1	48·9	Cloudy; viola Canadensis; aspens in young leaf.
June 1....	75·5	34·9	Fair; thunder; thaspium cordata.
" 2....	62·8	47·2	Fair; rain; Bow river very muddy and high.
" 3....	60·4	38·9	Fair; astragalus alpina.
" 4....	55·7	38·7	Cloudy; rain; commandra livida.
" 5....	47·0	36·8	Cloudy; rain; chickweeds in flower.
" 6....	51·1	36·4	Cloudy; light rain.
" 7....	57·0	32·9	Cloudy; Lake Minnewanka open.
" 8....	66·5	28·9	Fair; wasps; cow birds; corralhoriza innata.
" 9....	71·0	31·1	Fair; heavy dewfall; very fine day and night.
" 10....	75·1	34·8	Fair; very fine day and night; several plants out.
" 11....	75·5	34·5	Fair; very fine day and night.
" 12....	71·8	36·9	Fair; light rain.
" 13....	61·4	43·3	Cloudy; rain.

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MAXIMUM and Minimum Temperatures, &c.—*Continued.*

Date.	THERMOMETER READINGS.		Weather.
	Maximum for day.	Minimum for day.	
1909.	°	°	
June 14 ...	72·9	32·7	Fair; heavy dewfall; very fine day.
" 15....	76·3	38·4	Fair; lycena butterflies numerous; aspen poplars in good leaf.
" 16....	69·0	48·9	Cloudy; light rain; fine day; clematis.
" 17....	66·9	43·5	Cloudy; wood anemones out.
" 18....	70·0	48·3	Fair; fine day.
" 19....	69·1	40·2	Fair; yellow columbine; fine sunset.
" 20....	63·2	46·8	Cloudy; rain.
" 21....	65·9	38·2	Cloudy; rain.
" 22....	62·4	40·2	Cloudy.
" 23....	60·4	43·8	Cloudy.
" 24....	54·1	41·0	Cloudy; rain.
" 25....	59·2	33·9	Cloudy; rain.
" 26....	61·4	31·7	Cloudy; river about clear again.
" 27....	66·3	40·9	Fair; fine day.
" 28....	66·0	35·2	Fair; fine day.
" 29....	66·2	38·8	Cloudy; rain; thunder.
" 30....	79·4	47·4	Fair; very fine day and night; many beetles.

N. B. SANSON,
Meteorological Agent.

PART VI

YUKON TERRITORY

YUKON TERRITORY

REPORT OF THE COMMISSIONER.

COMMISSIONER'S OFFICE,

DAWSON, Y.T., April 23, 1909.

The Honourable FRANK OLIVER,
Minister of the Interior,
Ottawa.

SIR,—I have the honour to submit the report of the Yukon Territory for the fiscal year ending March 31, 1909.

GOLD PRODUCTION.

The gold production for the year ending March 31, 1909, shows a considerable increase over that of last year, ending March 31, 1908. According to the returns in the Comptroller's office, the number of ounces produced was 217,350·92, which, at the valuation of \$15 per ounce for royalty purposes, amounts to \$3,260,263.75, or an increase of \$440,000 over last year's output. It is considered that there will now be a steady increase in the annual gold production of the Territory.

HYDRAULIC MINING AND DREDGING.

The completion of the water system by the Yukon Gold Company will enable it to begin hydraulic operations on a large scale during the present year. This company will also operate seven dredges—four on Bonanza and three on Hunker—and three hydraulic elevators. All the other dredges already installed will be in full operation as soon as the season opens, and probably other new dredges will be placed on the Stewart river during the early part of the season. Attention is called to the exhaustive report of Mr. A. J. Beaudette, the mining engineer, herewith attached, which contains much valuable and carefully collected information.

INDIVIDUAL MINING.

Considerable work has been carried on by individual miners at Granville, Quartz and Blackhills, in what is known as the Klondike district, and numbers are also working on Glacier and other creeks in the Fortymile district with considerable success.

QUARTZ.

Prospecting has been carried on all winter, particularly at the head of Dominion creek, where considerable work has been done by a local company. The rock found carries good values, and the parties concerned are most encouraged. They intend proceeding with the work most vigorously during the summer months. Other miners are arranging for the installation of a stamp mill at the head of Victoria gulch, a tributary of Bonanza creek, where splendid specimens of gold-bearing quartz have been found. It is considered that the time is not far distant when the numerous quartz propositions will add materially to the development of the Territory. At Conrad, in the southern end of the Territory, a concentrator has been erected and is now in full operation. The development of quartz on a large scale in any new country always

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takes considerable time, but it is confidently expected that the day is not far distant when the stamp mill will be at work in many parts of the Territory. The report of Mr. R. C. Miller, Assistant Gold Commissioner, gives important details concerning the mining industry in the southern portion of the Territory.

AGRICULTURE.

The development of this industry during the past few years has been most remarkable. Constant cultivation seems to increase the fertility of the soil. A few years ago all vegetables consumed in the Yukon were imported, but now potatoes, carrots, turnips, celery, cabbage, cauliflower, besides radishes and lettuce in abundance, are locally grown. In many cases the Yukon vegetables are decidedly superior to those imported. Oats are also grown but usually cut green for fodder. Native hay is used in outside districts, and butter-making has been successfully attempted but not as yet upon a large scale. In a recent report of the president of the White Pass and Yukon Route, a falling off of the traffic for last year is attributed, to a certain extent, to the smaller importation of perishables, consisting mainly of vegetables.

YUKON COUNCIL.

The session of the Yukon Council commenced on July 21 and lasted until August 10. Ten ordinances were passed, among the most important being the Employers' Liability Ordinance. Under the provisions of an amendment to the Yukon Act, which amendment comes into force on May 1 next, the Yukon Council will now consist of ten elected members. There are five electoral districts in the Territory, and two members will be elected for each district. The revision of the lists is now taking place preparatory to the election. The revenue of the Territory for the nine months ending March 31 was \$293,188.97, and the expenditure, \$232,918.88.

EDUCATION.

The schools throughout the Territory have been maintained in a high state of efficiency. Under the auspices of the Ontario Department of Education local examinations were held at Dawson for matriculation into Toronto University. The percentage of passes was high, as well as the average of marks obtained. Several graduates of the Dawson high school are now taking courses in arts and engineering at the universities of Toronto, Chicago and Ann Arbor.

ADMINISTRATION OF JUSTICE.

I am glad to be able to report that the Territory, during the past year, has been almost entirely free from crime of a serious nature. The members of the Royal Northwest Mounted Police, under the efficient command of the Assistant Commissioner, Major Wood, continue to perform their duties with zeal and promptitude. Although numbers of foreign miners come into the Territory each year, the police protection afforded has been adequate, and no disturbances of any kind have occurred.

INDIANS.

The Indians of the Territory have received the care of the government as in the past. An outbreak of small-pox occurred in an Indian tribe near Eagle, Alaska, but the prompt establishment of a quarantine prevented the spread of this dread disease. No sickness of the nature of an epidemic has visited the Yukon Indians during the past year. They are generally hard-working and self-sustaining, living principally by hunting and fishing, but the absence of game in close proximity to their settlements

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makes it more difficult each year for them to obtain the means of sustenance. It is estimated that the present Indian population of the Territory is about 1,000. Three schools, where elementary instruction and training are given to Indian children, are being conducted by teachers under the auspices of the Church of England.

GENERAL.

Perhaps the most noticeable feature of the mining industry during the past year has been the increased confidence that the Territory is just about entering on an era of great quartz development. Recent investigations are most gratifying, and within a few months it is believed the question will have been advanced a long way towards solution.

I desire to express my appreciation of the efficient service rendered by all the officials of the different departments of government in the Territory.

Reports from the Comptroller, Gold Commissioner, Crown Timber and Land Agent, Director of Surveys and Government Mining Engineer are herewith inclosed.

I have the honour to be, sir,

Your obedient servant,

ALEXANDER HENDERSON,
Commissioner.

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No. 1.

REPORT OF THE GOLD COMMISSIONER.

OFFICE OF THE GOLD COMMISSIONER OF THE YUKON TERRITORY,

DAWSON, Y.T., April 21, 1909.

The Commissioner of the Yukon Territory,
Dawson, Y.T.

SIR,—I have the honour to submit herewith my report for the twelve months ending 31st ultimo.

The total receipts shown by the said report amount to the sum of \$94,236.13, which is a decrease of \$27,009.87 from the receipts of the previous fiscal year. The decrease in question is accounted for principally by the reduction of the fees for renewal of placer mining claims which took effect on July 20 last, and also by the decrease in the receipts from the issuing of placer mining grants and relocation grants, and from the recording of documents.

On the other hand it will be seen from my report that the sum of \$8,815.65 was received in this office during the last fiscal year, whilst no money was received from the same source, namely, rentals for dredging leases, during the previous fiscal year.

Hereto attached will be found also the financial statement, giving the receipts of this office during the said fiscal year, together with the revenues collected at the offices of the mining recorders for the Duncan and Sixtymile mining districts, accounted for during the said fiscal year.

A comparative statement with the receipts of the previous fiscal year will also be found attached to the said financial statement.

Another statement will also be found attached hereto, giving a list of the first locations (generally called discoveries placer mining claims) which have been recorded in the Dawson mining district during the said fiscal year, and the names of the creeks, hills, benches, bars or plains where these locations were made. They number 76 in all, and although they are commonly called discoveries, they are not entitled to be called so in every instance, because the applicants for the same have not established, and have not had to establish to the satisfaction of the mining recorder that they had made a discovery of gold.

The returns for the Duncan mining district, which are embodied in our financial statement, show an increase in placer mining grants and a slight decrease in the receipts from renewal grants and a considerable decrease from relocation grants.

The returns for the Sixtymile mining district show a decrease in the receipts from renewal grants, which is fully accounted for by the reduction of the renewal fee as herein above stated, but the receipts from placer mining grants and relocation placer mining grants are about the same as during the previous fiscal year.

As regards the mining operations which were carried on during the said fiscal year, I do not see any occasion to devote any attention to that matter in this report, as the government mining engineer has prepared a report in that respect which gives, I understand, full particulars.

Your obedient servant,

F. X. GOSSELIN,
Gold Commissioner.

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SCHEDULE showing the placer discovery claims recorded in the Dawson district during the fiscal year ending March 31, 1909.

Date of Location.	Locator.	Description of Property.
2 April	Geo. R. Clark	Hill Dago Gulch, tributary of Hunker.
2 "	Geo. R. Clark	Bench R. L. Henry Gulch.
3 "	John Fawcett	Bar Kimber Island opposite Fort Reliance.
3 "	Chas. D. Connor	Creek David, tributary of Goring.
3 "	D. J. R. Cameron	Creek Donald, tributary of Black Hills.
10 "	James Archibald	Creek on tributary of Hunker at 36 below Discovery.
14 "	J. T. Rosman	Creek Dion Gulch, tributary of Yukon.
29 "	Jujiri Wada	Creek High Cache, tributary of Firth River.
1 May	John Bruholski	Creek Brook, tributary of Clear.
15 "	F. C. Graham	Creek U $\frac{1}{2}$ Gravel, tributary of Flat.
15 "	Murdo Mische	Creek L $\frac{1}{2}$ Gravel, tributary of Flat.
21 "	R. A. Fox	Creek Log Cabin, tributary of Fortymile.
29 "	Wm. Hayhurst	Creek Little Dome, tributary of Herbert.
2 June	Joseph Toseo	Hill R. L. Hubrick, tributary of Hunker.
2 "	F. H. Osborn	Hill L. L. 4, 5, 6 above Discovery Blackhills.
10 "	N. A. Watt	Creek Spring Gulch, tributary of Bonanza.
15 "	Wm. Freido	Creek Freido Gulch, tributary of Hunker.
20 "	E. Rogers	Creek on 19 Pup, tributary of Bonanza.
26 "	L. W. Steele	Creek on tributary at 1 above Discovery Last Chance.
29 "	Jas. Sample	Creek on Slough, tributary of Clear.
29 "	Jas. Sample	Hill on L. L. Slough.
2 July	J. H. Baker	River R. L. Stewart $\frac{1}{2}$ mile below Lake.
2 "	L. Matchett	Creek Dome, tributary of Blackhills.
8 "	T. W. Kirkpatrick	Creek L $\frac{1}{2}$ Windy Bill, tributary of Klondike.
8 "	H. Kuchman	Creek U $\frac{1}{2}$ " " " "
8 "	T. W. Kirkpatrick	Creek Turgeon, tributary of Windy Bill L $\frac{1}{2}$.
15 "	H. Kuchman	Creek U $\frac{1}{2}$ " " " "
15 "	Geo. Hodgins	Creek Hodgins, tributary of Blackhills.
21 "	Richard Berling	Creek U $\frac{1}{2}$ Leotta.
21 "	Geo. Waldt	Creek L $\frac{1}{2}$ Leotta.
3 August	Geo. Hodgins	Creek Gough, tributary of Blackhills.
3 "	Geo. Hodgins	Dugas Creek, tributary of Blackhills.
3 "	O. W. Hobbs	Creek Stephens, tributary of Scroggie.
3 "	W. J. Lee	Creek L $\frac{1}{2}$ Walkalla, tributary of Scroggie.
3 "	C. E. Hirding	Creek U $\frac{1}{2}$ " " " "
14 "	A. B. Thornton	Creek Moosehorn, tributary of Henderson.
18 "	Thomas Burke	Creek Milway, tributary of Scroggie.
8 Sept.	Fred. Hurst	Creek Laporte, tributary of Slough.
16 "	G. M. Brown	Creek Nodine, tributary of Moose.
22 "	R. W. Brazil	Creek Brazil, " "
3 October	H. E. Boucher	Canoe, tributary of Blackhills.
5 "	L. G. Preston	Creek L $\frac{1}{2}$ Britton, tributary of Maisie Mae.
5 "	Jas. Britton	Creek U $\frac{1}{2}$ " " " "
12 "	E. J. Corp	Creek Corp, tributary of Goring.
22 "	J. L. Walters	Creek Selwyn, tributary of Yukon.
29 "	J. Butler	Creek Dixie, tributary of Barker.
30 Nov.	Thomas O'Hara	Hill R. L. Slough.
2 Dec.	Wm. Nicoll	Creek Partridge, tributary of Stewart.
3 "	L. A. Kephart	Creek Viola, tributary of Maisie Mae.
5 "	W. S. Barkley	Creek left fork Henderson.
14 "	Alex. Walker	Bench R. L. Yukon at mouth of Thistle.
16 "	John Shaller	Creek James, tributary of Log Cabin.
16 "	Richard Burke	Creek Pete " "
17 "	Oswald Heinze	Creek Heinze, tributary of Blackhills.
17 "	E. A. Froberg	Creek Barette " "
21 "	D. G. Robertson	Creek Just " "
29 "	Duncan McPhail	Creek Mitchell, tributary of Hunker.
29 "	Duncan McPhail	Creek Hubrick " "
29 "	Duncan McPhail	Creek Johanna " "
6 January	Joseph Butler	Creek Hines, tributary of Barker.
7 "	Carrie Korbo	Creek on tributary of Rob Roy.
15 "	O. F. Jenkins	Creek Franklin, tributary of Barker.
15 "	O. F. Jenkins	Creek Iron " "
20 "	A. O. Backe	Creek, tributary of Hunker at 77 below Discovery.
10 February	S. J. Thurber	Creek U $\frac{1}{2}$ Prescher, tributary of Barker.
10 "	G. E. Nichols	Creek L $\frac{1}{2}$ " " " "
19 "	W. D. McKay, Jr.	Bar Indian Island in Yukon.
19 "	A. Dunlop	Hill L. L. Cameron, tributary of Yukon.

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SCHEDULE showing the placer discovery claims recorded in the Dawson district during the fiscal year ending March 31, 1909.—*Concluded.*

Date of Location.	Locator.	Description of Property.
3 March..	J. Tilton	Creek Durkee, tributary of Yukon.
3 " ..	Percy Dent.....	Creek Agate, tributary of McRae.
12 " ..	J. G. Morin.....	Creek Jensen, tributary of Dominion.
13 " ..	D. J. McIntyre.....	Creek Slough.
16 " ..	C. A. Smith and B. Silverman.....	Creek Brewer, tributary of Stewart.
22 " ..	Nelson Ponschay.....	Creek 99 Gulch, tributary of Thistle.
25 " ..	O. F. Jenkins.....	Creek Jenkins, tributary of Yukon.
25 " ..	W. H. Misener.....	Creek Misener, tributary of Yukon.

Certified correct,

G. P. MacKENZIE,

Mining Recorder.

FINANCIAL statement of the Gold Commissioner's Office, from April 1, 1908, to March 31, 1909.

RECEIPTS.

Placer—		
To Grants	\$ 6,140 00	
Relocations	4,960 00	
Renewals	50,775 00	
Registered documents	5,267 00	
Abstracts	87 00	
	<u>\$ 67,229 00</u>	
Quartz—		
To Records	\$ 1,460 00	
Certificate of work	1,215 00	
Certificate of partnership	72 50	
Registered documents	615 00	
Lieu of assessment	100 00	
Certificate of improvements	27 50	
Acreage	510 41	
Abstracts	4 00	
	<u>\$ 4,004 41</u>	
Sundry Accounts—		
To Water grants	\$ 950 00	
Hydraulics	2,147 09	
Dredging	8,815 65	
Advance deposits	1,907 98	
	<u>\$ 13,829 72</u>	
Duncan—		
To Placer grants	\$ 2,630 00	
Relocations	370 00	
Renewals	3,405 00	
Registered documents	669 00	
Quartz records	40 00	
Quartz registered documents	10 00	
Water grants	50 00	
	<u>\$ 7,174 00</u>	
Sixty-mile—		
To Placer grants	\$ 100 00	
Relocations	170 00	
Renewals	1,398 00	
Registered documents	145 00	
Quartz records	20 00	
Water grants	175 00	
	<u>\$ 2,008 00</u>	
Disbursements—		\$ 94,236 13
By Receiver General	\$ 92,159 65	
Gold Commissioner's Suspense Account	168 50	
Balance account	1,907 98	
	<u>\$ 94,236 13</u>	

Certified correct,

F. A. H. FYSH,

Accountant.

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RECAPITULATION.

FINANCIAL Statement Gold Commissioner's Office, Year ending March 31, 1909.

	Placer Grants.	Renewals.	Relocations.	Registered Documents.	Abstracts.	Water Grants.	Hydraulics.	Dredging.	Quartz Records.	Certificates of Work.	Certificates of Partnership.	Registration of Documents.	Lien of Assessment.	Certificates of Improvements.	Abstracts.	Average.	Advances Deposited.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Dawson	6,140 00	50,775 00	4,960 00	5,267 00	87 00	950 00	2,147 00	8,815 65	1,460 00	1,215 00	72 50	615 00	100 00	27 50	4 00	510 41	1,907 98
Duncan	2,630 00	3,405 00	370 00	689 00	..	50 00	..	..	40 00	..	..	10 00	..	..	..	..	..
Sixtymile	100 00	1,368 00	170 00	145 00	..	175 00	..	..	20 00	..	..	..	..	..	..	..	..
	8,870 00	55,578 00	5,500 00	6,081 00	87 00	1,175 00	2,147 00	8,815 65	1,520 00	1,215 00	72 50	625 00	100 00	27 50	4 00	510 41	1,907 98

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COMPARATIVE STATEMENT.

RETURNS GOLD COMMISSIONER'S OFFICE.

	Year ending March 31, 1908.	Year ending March 31, 1909.	Increase 1908.	Decrease 1909.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Placer grants.....	15,180 00	8,870 00		6,310 00
Renewals.....	73,935 00	55,578 00		18,357 00
Relocations.....	7,160 00	5,500 00		1,660 00
Registered documents (placer).....	13,444 00	6,081 00		7,363 00
Abstracts.....	39 00	87 00	28 00	
Water grants.....	1,250 00	1,175 00		75 00
Hydraulics.....	3,464 67	2,147 09		1,317 58
Dredging.....		8,815 65	8,815 65	
Quartz records.....	2,605 00	1,520 00		1,085 00
Quartz registered documents.....	665 00	625 00		40 00
Quartz certificate of work.....	747 50	1,215 00	467 50	
Quartz certificate of partnership.....	67 00	72 50	5 50	
Quartz lien of assessment.....	200 00	100 00		100 00
Quartz certificate of improvements.....	27 50	27 50		
Quartz acreage.....	459 60	510 41	50 81	
Quartz abstracts.....	2 50	4 00		1 50
Advance deposit.....	1,907 98	1,907 98		
Free miner's certificate.....	71 25			71 25
	121,246 00	94,236 13	9,368 96	36,378 83
Net decrease.....				27,009 87

Certified correct.

F. A. H. FYSH,
Accountant.

No. 2.

REPORT OF THE CROWN TIMBER AND LAND AGENT.

OFFICE OF THE CROWN TIMBER AND LAND AGENT OF THE YUKON TERRITORY,
Dawson, Y.T., April 21, 1909.

The Commissioner of the Yukon Territory,
Dawson, Y.T.

SIR,—I have the honour to submit herewith my report of the business transacted in this office during the last fiscal year ending on the 31st ultimo, namely:—

1. A statement of revenues in the Timber and Mines Branch amounting to the sum of \$22,158.62.

2. A statement of revenues in the Dominion Lands Branch amounting to the sum of \$8,993.96.

These statements show a total revenue of \$31,058.58 during the said fiscal year from the two sources in question, which is in excess of the revenues collected from the said sources during the previous fiscal year.

Only one coal mine, the Tantalus coal mine, was operated during the said fiscal year.

Seven entries for homestead were granted during the said fiscal year, as against five during the previous fiscal year.

Only one saw-mill, namely, the Klondike mill, owned by the North American Transportation and Trading Company, and situated on the island in the Klondike river at its mouth, was operated last season, by the Yukon Saw-mill Company under a lease.

The wood cutting operations and timber cutting operations along the Lewes, Yukon, Stewart and Klondike rivers, and in the vicinity of Dawson, show about the same activity as in the previous years.

The wood camps within a radius of about ten miles around Dawson were visited several times during the winter by the Crown Timber Inspector, and were generally found operating under proper authority, either on timber berths, or under timber permits, or under contracts from claim owners and operators.

The wood and timber camps up the Klondike river were visited by the Crown Timber Inspector last November, and were found to be operating under proper authority.

Your obedient servant,

F. X. GOSSELIN,
Crown Timber and Land Agent.

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DOMINION LANDS BRANCH.

	General Sales.	Rentals.	Registration Fees.	Survey Fees.	Homestead Fees.	Total.
1908.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
April	77 90	5 00	4 50			87 40
May		1,750 00			10 00	1,760 00
June		2,078 85	6 00		10 00	2,094 85
July		2,077 55				2,077 55
August	12 00				20 00	32 00
September	293 52		4 00		20 00	317 52
October	20 00	2 66	2 00			24 66
November	899 59	15 00			10 00	924 59
December	114 67					114 67
1909.						
January	60		14 00			14 60
February	386 33		2 00			388 33
March	77 49	1,080 30				1,157 79
	1,886 10	7,009 36	28 50		70 00	8,993 96

CROWN TIMBER BRANCH.

	Royalty.	Timber Permits	Seizures.	Hay Permits.	Coal Royalty.	Total.
1908.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
April	104 96	286 50	118 00			509 46
May	1,197 31	358 50	189 00	32 00		1,776 81
June	1,371 83	603 65	28 50	34 00		2,037 98
July		1,005 50	28 00	69 00	36 52	1,139 02
August	1,019 24	825 21	76 41	5 50	77 02	2,003 38
September	14 00	1,697 00	82 00			1,793 00
October	1,090 18	2,488 00	174 25		91 14	3,843 57
November	965 62	1,336 00	16 00		167 05	2,484 67
December	10 04	886 25	40 50			936 79
1909.						
January	1,175 31	285 00				1,460 31
February	1,596 88	1,562 00				3,158 88
March	88 25	917 00	5 50			1,014 75
	8,633 62	12,250 61	762 16	140 50	371 73	22,158 62

Certified correct.

F. A. H. FYSH,
Accountant.

No. 3.

REPORT OF THE COMPTROLLER.

COMPTROLLER'S OFFICE,

DAWSON, Y.T., April 10, 1909.

The Honourable ALEXANDER HENDERSON,
Commissioner of the Yukon Territory,
Dawson, Y.T.

SIR,—I have the honour to submit my annual report for the year ending March 31, 1909.

Under the appropriation through the Department of the Interior, 'Administration of the Yukon Territory,' the expenditure for the fiscal year just ended was \$148,695.74, as shown by the monthly statements and vouchers forwarded to the department.

On account of subsidy to river steamers, the amount expended was \$750, the unexpended balance being deposited to the credit of the Receiver General, this vote having been discontinued.

From July 1, 1908, to March 31, 1909, the local revenues and expenditures of the Yukon Territory were:—Revenue, \$293,188.97; expenditure, \$232,918.88, as per balance sheet attached. Statements and vouchers were forwarded to the Auditor General at the end of each quarter as required by the ordinance.

The expenditure on account of the Department of Justice for the year just closed was \$24,739.08; monthly returns being made to that department.

The expenditure on account of Department of Indian Affairs for the relief of sick and destitute Indians was \$6,936.

Under the Letter of Credit account, Department of Public Works, for the maintenance and repairs of public buildings, in the name of the Superintendent of Public Works and myself, the expenditure was \$89,658.78.

From the vote for river improvements, in the name of the Commissioner and myself, the expenditure was \$5,054.12.

The royalty collected in the Territory for the year ending March 31, amounted to \$81,502.92; collected at Dawson, \$79,791.02, Whitehorse, \$1,711.15, and Fortymile, 75 cents.

The revenue from free certificates issued to exporters of gold from Alaska was \$166.

From confiscated gold dust, there was a sum of \$75.50 realized.

The revenue from these sources was deposited to the credit of the Receiver General, drafts being sent to the department weekly and statements at the end of each month.

From the sale of Yukon Territorial Court law stamps, the revenue received was \$3,344.

The returns of the revenue received in the office of the Gold Commissioner and Crown Timber and Land Agent have been checked each month as formerly, and returns forwarded to the department; the suspense account in the Gold Commissioner's office also being checked monthly and the cheques countersigned in payment of disbursements.

In accordance with your instructions, I made a thorough and exhaustive inspection of the office of the Mining Recorder for the Duncan mining district. A copy of my report was forwarded to the department under date of March 30.

Your obedient servant,

J. T. LITHGOW,
Comptroller.

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BALANCE SHEET GOVERNMENT OF YUKON TERRITORY, MARCH 31, 1909.

Appropriation.	Dr.	Expenditure.	
\$ cts.		\$ cts.	
	Balance from 1907-08.....	271 46	
23,500 00	Salaries and travelling expenses.....	16,071 10	
49,500 00	Schools.....	32,935 12	
5,000 00	Contingencies.....	3,166 56	
4,300 00	Dawson free library (Terr'y).....	3,125 00	
107,090 00	Roads, bridges and public works.....	88,443 39	
13,000 00	Election of 10 members Yukon Council.....	"	
4,000 00	Indemnity " " ".....	3,060 00	
950 00	Preventive service.....	621 64	
5,000 00	Printing and Stationery (Terr'y).....	2,132 06	
900 00	Whitehorse free reading room.....	600 00	
34,600 00	Hospitals, charities and quarantine.....	25,389 02	
4,600 00	Assay office, Whitehorse.....	2,432 00	
5,000 00	Miscellaneous expenditure.....	2,974 85	
10,500 00	Town of Whitehorse.....	9,924 90	
3,500 00	Street lighting (city).....	2,770 30	
500 00	Printing and stationery (city).....	246 75	
2,100 00	Dawson free library ".....	1,575 00	
34,300 00	Dawson fire department ".....	24,343 87	
10,000 00	Streets and sidewalks ".....	8,347 75	
1,000 00	Contingencies ".....	392 63	
4,700 00	Salaries ".....	3,524 94	
2,000 00	Dog pound ".....	842 00	
	Balance on Hand.....	59,998 63	293,188 97
Estimated Revenue.	Cr.	Revenue Received.	
\$ cts.		\$ cts.	
59,375 00	Dominion Government grant roads and bridges.....	50,000 00	
125,000 00	" " " local purposes.....	93,750 00	
23,500 00	Liquor licenses (Terr'y).....	38,420 30	
35,000 00	" permits.....	46,347 26	
16,000 00	Local taxation and Sundry Revenue ..	15,651 70	
21,500 00	Proportion liquor licenses (city).....		
5,000 00	City licenses.....	756 00	
40,625 00	City taxation.....	48,263 71	293,188 97

No. 4.

REPORT OF THE GOVERNMENT MINING ENGINEER.

Dawson, Y.T., April 1, 1909.

The Commissioner of the Yukon Territory,
Dawson, Y.T.

SIR,—I have the honour to submit to you my annual report on the mining operations in the Yukon Territory for the year ending March 31 last.

The mining conditions have not, within the last year, changed very materially, at least not more than what would be expected in a placer camp of this age. In the districts of early gold discoveries the transition period, which has been in existence for the last few years, is nearly completed. The individual miner who worked the cream of the pay has given way to the large operator and gone to develop the outlying districts. This has been the case in that part of the Dawson mining district tributary to the Klondike river; that portion tributary to Indian river is gradually undergoing the same change, such as the upper part of Dominion creek and the upper part of Sulphur creek, and will likely last until the claims are consolidated and the plants installed on them.

Miller and Glacier creeks, tributaries of the Sixty-mile river, situated in the Sixty-mile district, are also in a stage of transition similar to that part of the Dawson mining district tributary to Indian river. Nearly the whole of Miller creek is included in a leasehold acquired by the N. A. T. & T. Company, which is now preparing the creek bed for dredging operations in the near future. There are a few claims situated on Miller creek, outside the limits of this leasehold, but there is very little work being done on them. All the claims situated on Glacier creek are rapidly being consolidated.

The number of productive mining operations on the old gold-bearing streams, which are still in a stage of transition are few, and such a condition is expected to last until there is a complete consolidation of the claims in these particular localities. In many instances there is only enough work being done, as required by the Placer Mining Act, to keep the claims in good standing.

With the aid of the grouping system, for the purpose of consolidation, it is possible to apply all the work of one plant as representation work for any number of claims in the group. It is obvious that many have taken advantage of this section of the regulations, and really abused it in order to avoid representation work, and it has, naturally, lessened the number of operations in the Territory. On the other hand it has helped many miners of limited means who are sinking in very deep ground, which has been the means of locating pay streaks which could not otherwise be found, and I must say that the conditions at present demand such a grouping system to be kept in force.

INDIVIDUAL MINING OPERATIONS.

The bulk of individual mining is still confined to the Dawson mining district. Apart from the few plants scattered here and there on the old gold-bearing streams upon which large operations are concentrated, as on Bonanza, Eldorado, Hunker, and in those parts of the Territory where consolidation of claims is being made, as on the upper part of Dominion creek, the upper part of Sulphur creek and a portion of Miller and Glacier creeks, the individual mining done, from which the main output is derived, is confined to the lower portion of Dominion creek, the middle of Sulphur creek, the lower portion of Gold Run creek, the whole of Quartz creek, the upper parts of Black Hills creek and some of the tributaries of Hunker creek.

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Black Hills creek, a tributary of Stewart river, is productive from Discovery to No. 23 above discovery. I am informed that pay has been located at four places in the lower portion of the creek, but no output is expected this coming year from the lower portion.

It is estimated that the spring washup and the summer work on this creek during the last year gave an output of \$45,000.

Livingston creek, a tributary of the South Fork of the Big Salmon river, is a steady producer. Over fifteen outfits were operating during the summer, and many are prospecting this winter. There is a transient population of 300 during the summer months and a stationary one of over 150 during the winter. The estimated output during the last year was \$100,000.

You will find herewith attached (Table No. 1), in a tabulated form, the number of individual mining operations conducted during the last year within the several mining districts in the Yukon Territory, together with the methods employed, and a few remarks on the existing conditions in each locality.

LARGE SCALE OPERATIONS.

These operations include dredging, hydraulicking, steam shovelling and electric elevators, or any other method employed whereby mechanical appliances have been substituted for manual labour; therefore, these operations are expected to be situated in localities where the individual miner could not operate any more at a profit or where the tenor of the gravels was too low grade for individual operations ever to be attempted.

The existing fields for these large operations are, at present, on Bonanza creek, Huuker creek, the hills and benches bordering on these streams and tributaries and in the valleys of the Klondike, Indian, Stewart and Fortymile rivers.

DREDGING.

The operation of dredges in frozen ground has been materially improved both in the manner of digging and in the way of thawing ahead of the dredges. The cost of thawing has been reduced fully 50 per cent, due principally to cheaper transportation of the fuel and the increase of point duty. The reduction in the cost of digging is due to the installation of hydro-electric transmission plants.

Most improvements have been made in the manner of digging. Where the bed-rock is soft and the gold is evenly distributed through the gravels the manner of digging has not changed, but as the gold, in this territory, is invariably close to or in bed-rock the manner of digging has been made to conform to the conditions of the bed-rock.

In localities where the bed-rock is hard, cracked and slabby it has been found necessary to go over the same area twice; the first time the buckets will take up all the material possible and 'bull dose' the bed-rock and the second time the bed-rock material itself will be taken up. Some dredge men have found it impossible to take up everything, in the shape of values, by going over only once.

You will find in Table No. 2, in a tabulated form, the number of dredges in operation in this territory together with other data in connection with the operations.

HYDRAULICKING.

There have been no new improvements in either the manner of working or the gold-saving appliances employed. In spite of the wet season during the last year the number of hydraulic operations was less than the previous year. This was due to the Yukon Gold Company having acquired many of the small hydraulic outfits which were operating during the previous year. There will be no increase in the number of hydraulic operations until the Yukon Gold Company has completed its water system, which will be in the course of a couple of years.

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Although the past season was a most favourable one for the hydraulic operator, it is only local water which is used, and the supply is not sufficient at its best. The dam constructed by the Yukon Gold Company at No. 57 above Discovery on Bonanza creek conserved all the water available to operate the hill and bench gravels of upper Bonanza creek, but there was not enough for all the hills and the elevators that were installed in the creek bed.

You will find herewith attached, in Table No. 3, in a tabulated form, the number of hydraulic operations conducted during the past season, together with some other data in connection therewith.

ELECTRIC ELEVATORS.

There are three elevators installed in the territory, two on Bonanza creek, owned by the Yukon Gold Company, and the other one on Hunker creek, owned by Messrs. Burke Bros. The Yukon Gold Company operates its elevators with electric power transmitted over its line from Little Twelvemile river, where the hydro-electric plant is situated; the other has steam as a motive power.

These elevators will do as much work as a dredge, cost less and will also operate in localities where the conditions are inimical to dredging. They are installed for the purpose of operating shallow creek diggings where the bed-rock is slabbly and hard and where there is no grade for the disposal of the tailings.

All the water used must be under pressure the same as in hydraulic operations. It is an open-cut mining method and subdivided into an hydraulic method.

All the elevators have proved successful. Considerable trouble was encountered with the pumps, which would plug up with moss and other waste material when the overburden was removed, but I am informed that this trouble will be obviated during the coming season, as other pumps have been installed for the purpose.

You will find in Table No. 2, in a tabulated form, the depth and area of ground worked, the quantity of water used and other data in connection therewith.

THE ASSAY OFFICE.

The Assay Office is situated in the town of Whitehorse, and is controlled by the local government. It is in charge of Mr. Robert Smart, whose work has been entirely satisfactory to both the public and the several smelting companies.

During the year, 806 assays were made sent from different parts of the Territory and Atlin, B.C. In addition to the above number of assays many qualitative determinations of ores were made which are not herewith tabulated.

The capacity of the office has been materially increased in the way of a 3 horse-power gasoline engine for pulverizing and crushing.

There was a decrease in the number of assays made this year in comparison with the last year, and that is due, no doubt, to the lack of prospection for copper ores, on account of the great reduction in price.

As we have no assay office in Dawson, all samples received here are sent to Whitehorse, through the White Pass Company, for assay.

You will find herewith attached, in Table No. 4, in a tabulated form, a statement of the number of assays made during the year.

Your obedient servant,

A. J. BEAUDETTE,
Government Mining Engineer.

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Indian River	1	3	4	4	Many of the outfits here tabulated are merely taking enough gold out of their claims, or on lays for grubstake purposes, and consequently they do not figure very much in the output. The amount taken out by these searchers of grubstakes ranges from \$800 to \$2,000 for every two men.
25—VI—21 Klondike River	1	1	2	27	The submerged bed of the Fortymile River is being dredged at a point about six miles above the mouth.
Stewart River	1	2	3	3	Bar digging operations are still being conducted on the Fortymile and Stewart Rivers with success, but that can only be done at low water.
Yukon River	1	2	2	5	On Dominion Creek, from the mouth of Gold Run Creek to creek claim No. 132 below lower discovery, a distance of about seven miles, there is no work going on and it does not appear that any will be done in the near future. From creek claim No. 132 below lower to the head of the creek the operations are very scattered. Most of the claims lying idle are kept in good standing by reason of the work being done on adjoining claims to which they are grouped.
Macmillan River	1	3	3	3	The number of placer mining outfits of all kinds in operation in the Dawson mining district is, as near as I can find, 473.
Fortymile River	1	1	5	15	Only individual mining is being done in this district, and it does not appear that any other class of mining will be attempted in the near future, although I just received some information that a company is contemplating installing a dredge at the mouth of the McQuesten River.
Duncan Mining District	1	1	1	1	The prospectors in this district have been very unfortunate in that the deposits are deep and only partly frozen, the unfrozen part being near bedrock, and admit uncontrollable quantities of water, which makes it impossible for a miner of limited means to make a success.
McQuesten River	1	1	1	469	The greater portion of the miners on Duncan Creek have gone away from the district on account of the wet ground, above mentioned. The pumps installed by the government on Duncan Creek were not a success, as the quantity of water to be controlled was too great. Some fairly good pay was found on Haggart Creek last year, which created quite a stampede. I was there last year shortly after the pay was discovered and again this winter. There are nine different outfits sinking on the benches and so far only one has found enough pay to justify drifting.
Mayo River	1	1	1	1	I saw some shafts being sunk which were 124 feet in depth and gravel had not yet been reached.
Sixty-mile Mining District	1	1	1	28	Of the fifteen outfits mentioned in the table herewith, only four are producing gold.
Miller Creek	1	1	1	31	The conditions and the quantity of work done in the Sixty-mile district have not changed within the last year.
Glacier Creek	1	1	1	4	
Ten-mile Creek	1	1	1	8	
Bedrock Creek	1	1	1	1	
* Bar diggings.	1	1	1	17	

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TABLE No. 3.
HYDRAULIC OPERATIONS.

Name of Operator.	Locality.	Length of Ditch.	Capacity of Ditch.	Pressure of Water.
Yukon Gold Company	Acklen Farm, R.L. Klondike River.	7½ miles	1,000 miner's inches.	350 feet.
"	Paradise Hill, L.L. Hunker Creek.	4 "	300 "	75 "
"	American Hill, L.L. Bonanza Creek.	8 "	1,000 "	250 "
Bonanza Creek Mining Company	Adams Hill, L.L. Bonanza Creek.	3½ "	800 "	175 "
O. R. Brenner	French Hill, Eldorado Creek.	2 ditches, 3 and 4 miles	500 miner's inches in all	150 "
Canadian D. and H. Company	Lovett Hill, R.L. Bonanza Creek.	2½ miles	150 inches.	150 "
Grotschier Concession.	Leasehold, L.L. Klondike River.	1½ "	150 miner's inches.	75 "
Younkins, J.	Hill, L.L. Last Chance Creek.	3 "	900 "	75 "
Ellbeck & Collins.	"	3½ "	200 "	100 "
Dolan, et al.	"	3½ "	200 "	100 "
Cook, et al.	Boulder Hill, L.L. Bonanza Creek.	2½ "	250 "	80 "
Elliot, et al.	Paradise Hill, Hunker Creek.	2½ "	300 "	75 "
Murphy and Gould.	Nugget Hill, L.L. Hunker Creek.	2½ "	150 "	75 "
Larson, A.	Temperance Hill, Gold Bottom Creek.	1½ "	150 "	75 "
De Biegier and Company.	"	4 "	200 inches	100 "
Burke, et al.	Whisky Hill, R.L. Hunker Creek.	1½ "	150 miner's inches	75 "
William's Concession	Hills, R.L. Hunker Creek.	9 "	300 inches	150 "
Delbie, et al.	Hills, L.L. Hunker Creek.	4½ "	300 "	100 "
Geisler Bros.	Hill, L.L. Dominion Creek.	1 "	75 miner's inches.	75 "
Kedner and Steffens	Hill, R.L. Quartz Creek.	2 "	100 "	50 "
Canadian D. and H. Company.	Hill, L.L. Bonanza Creek.	3 "	200 "	100 "
Finlayson, E. O.	Hill, L.L. Klondike River.	6 "	300 "	150 "
J. W. Park.	Hill, L.L.	5½ "	75 inches	75 "
Ballarat Creek Mining Company.	Leasehold, Ballarat Creek	5 "	300 miner's inches	175 "
Yukon Gold Company.	Hill, L.L. Bonanza Creek.	4 "	500 "	150 "

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TABLE No. 4.

Assays made in the Government Assay Office, Whitehorse, Y.T., during the Year ending March 31, 1909.

Elements.	April, 1908.	May, 1908.	June, 1908.	July, 1908.	Aug., 1908.	Sept., 1908.	Oct. 1908.	Nov., 1908.	Dec., 1908.	Jan., 1909.	Feb., 1909.	March, 1909.	Total.
Gold and silver	11	25	131	73	81	96	52	23	13	9	18	.....	532
Copper.. ..	5	18	81	19	24	48	21	16	2	2	6	.....	242
Lead.....			1		2								3
Antimony.....	1		1		8	6							16
Manganese ..				1		2							3
Nickel.....										1			1
Platinum.....							1						1
Carbon.....							3						3
Magnesia.....										1	1		2
Aluminum.....											1		1
Calcium.....											1		1
Carbon dioxide.											1		1
Totals.....	17	43	214	93	115	152	77	39	15	13	28	.....	806

No. 5.

REPORT OF THE DIRECTOR OF SURVEYS.

SURVEY OFFICE, YUKON TERRITORY,

DAWSON, Y.T., April 12, 1909.

The Hon. ALEXANDER HENDERSON, K.C.,
 Commissioner of the Yukon Territory,
 Dawson, Y.T.

SIR,—I have the honour to submit the following report of the work done in the Survey Department for the year ending March 31 last.

The staff has consisted of Mr. Gibbon, Captain Bennet and myself. Captain Bennet relieved the correspondence clerk during part of January, February and March while the latter was absent on leave.

During the year traverses were made of the location on 'Tab Hill,' 'McInnes Hill' and on Indian River from No. 10 above 'Hobbs' Discovery to the mouth, a distance of about ten miles. In the above instances staking and restaking had taken place until it was quite impossible for the mining recorder to ascertain by description, as given by the stakers, if grants were being given to more than one applicant for the same ground.

These traverses proved of valuable assistance to the gold office, for which plans were furnished. Mr. Gibbon also made traverse of the location stakes on a portion of Moose creek in the Fortymile district for the same purpose.

During July, August and September Mr. Gibbon established thirty-four miles of base lines on Black Hills creek and its tributaries, including end boundaries of claims, returns of which will soon be ready to file. Base lines were established on a portion of Black Hills creek in the spring of 1901 by Mr. Cautley, D.L.S., under contract made with Mr. Ogilvie, who was about that time succeeded by Commissioner Ross, who considered the survey too expensive and did not have Mr. Cautley make the returns. The lines established by Mr. Cautley were used as far as possible by Mr. Gibbon.

I surveyed base lines on 'Examiner Gulch,' 'Dion Gulch' and 'Falconer Gulch,' returns of which are being prepared. 'Examiner Gulch' is a tributary on the left limit of Bonanza at No. 98 below Discovery. 'Falconer Gulch' and 'Dion Gulch' are the first two tributaries of the Yukon river on its right limit above the Klondike river.

Captain Bennet has been employed in general office work draughting and keeping up as far as possible compiled sheets of the surveys brought into the office, making tracings and blue-prints of plans on file, and giving general information to the public, which by the way occupies almost half the time of one clerk.

A large plan was compiled by Capt. Bennet and myself of the whole territory, showing all the general topography at present to hand and particularly the location of all roads and trails that have been constructed in the territory. The plan also contains a table showing the number of miles of roads and trails constructed and the year in which they were made.

This map was made for the information and at the request of the Minister of the Interior.

Plans and returns of the following surveys were filed in this office during the past year :—

Group lots including quartz claims.	124
Advertised placer claims.	24
Base lines and traverses.	11

These include surveys made by surveyors in private practice in the territory. There were also 168 blue-prints and 87 tracings made in the office.

Your obedient servant,

C. W. MACPHERSON,

Director of Surveys, Y.T.

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No. 6.

-REPORT OF THE ASSISTANT GOLD COMMISSIONER.

OFFICE OF THE ASSISTANT GOLD COMMISSIONER,

WHITEHORSE, Y.T., April 16, 1909.

The Hon. ALEXANDER HENDERSON,
Commissioner of the Yukon Territory,
Dawson, Y.T.

SIR,—I beg to submit the following report concerning the development and general conditions existing in the southern Yukon, including the Whitehorse, Conrad and Kluane districts, during the past year, and also concerning the prospects and possibilities for the coming year.

WHITEHORSE DISTRICT.

During the first several months of last year the White Pass Railway continued work on the spur from its main line to the Whitehorse copper belt, completing seven miles of track. This line is now in a position to serve the southern half of the above belt but up to date none of the mine owners in that section have seen fit to ship ore. This is undoubtedly owing to two facts, first the low price of copper, and second, the very high freight rate demanded by the above railway. Prior to 1908 the ore rate from Whitehorse to the smelters was \$5 per ton for sacked ore and \$6 for ore in bulk. At present the railway ask \$13.50 from Carcross to the smelter, and from Whitehorse to smelter from \$5 per ton for ore valued at \$8 per ton to \$30 per ton and over on higher grades of ore.

The only properties on the Whitehorse belt that worked during 1908-9 were the Copper King and the War Eagle, the former shipping 300 tons of ore, valued at \$11 per ton, but losing money by so doing.

On the whole it may be said that the Whitehorse copper belt has not developed at all during the last year, neither of the claims worked having made much progress. For the number of quartz and copper claims in good standing in this district, see Table No. 1 and for general data concerning principal claims see Table No. 2.

The Big Salmon Placer district produced about \$60,000, employing about 50 men. No new discoveries were made in this district and it is probable that the coming year will be much the same as last. For general information as to quantity and value of gravel in this district see Table D.

The collections on account of timber and land were greater than during the previous year and the overdue payments on land have been practically all met. Only one application for a homestead entry was filed during the year. For total collections from all sources for the year see Table No. 5.

CONRAD DISTRICT.

In the Windy Arm section of the above district the Yukon District Gold Mining Company, successor to the Conrad Consolidated Company, is installing a 60-ton concentrating mill at a cost of \$60,000 and is developing several other properties to a considerable extent and with encouraging results. For general data concerning the mining operations in this section see Table No. 2 (from Venus claim to end of table). The Wheaton and Watson Divisions of the Conrad District have been rather quiet, although the small operations carried on in these sections have given the operators every encouragement. For general data respecting mines in these divisions see Table

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No. 2 (Gold Hill to Tally-Ho claim inclusive). For total collections made in the Conrad office for the year see Table No. 6. There will be little or no work in this district under the present ore rate. If, however, the railway company meets the miners half way the whole district will undoubtedly be very active.

KLUANE DISTRICT.

The Kluane placers, including Sheep, Ruby, Burwash and Fourth of July creeks, were worked to about the same extent as last year, producing about \$20,000 and employing about 25 men. During last winter a hill channel has been found on Burwash Creek which is said to prospect very well and from which it is expected good results will be obtained during the coming summer. For quantity and value of placer deposits yet unworked in this district see Table D.

The Kluane and White river copper areas were simply represented during the past year. Until this district is served by a railway it will be impossible to do more than prospect the copper areas.

For collections made in the Kluane office during 1908-9 see Table No. 7. This table is incomplete, as February and March, 1909, have not yet been received from the recorder for the above district; when the above returns are received a statement will be forwarded to you at once as to the amounts collected for the above months.

I also beg to inclose tables showing the distances between points in the southern Yukon and freight rates between principal points, see Tables 3 and 4.

The tables inclosed are—

- No. 1. Quartz claims in good standing, &c.
- No. 2. General information respecting quartz mines.
- No. 3. Table of distances.
- No. 4. Table of freight rates.
- No. 5. Collections in Whitehorse office.
- No. 6. Collections in Conrad office.
- No. 7. Collections in Kluane office.
- No. D. Respecting values of unworked placer deposits.
- No. E. Respecting ore deposits.

Your obedient servant,

R. C. MILLER,
Assistant Gold Commissioner.

TABLE No. 1.

STATEMENT showing Number of Quartz Claims in Good Standing in Whitehorse, Conrad and White River Districts, also Number of Claims Crown Granted in each of above Districts.

Districts.	Total Claims under lease.	Number of Locations 1908-9.	Number of Renewals, 1908-9.	Claims Crown Granted.
Whitehorse	275	97	178	42
Conrad	285	70	201	14
White River	44	31	13

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TABLE No. 2.
GENERAL INFORMATION RESPECTING QUARTZ MINES.

Claim.	Owners.	Date record.	Ore shipped.	Ore on dump.	Cost transportation.	Men employed 1908-9.	Men employed 1909-10.	P. C. value of ore.	Machinery.	Work completed during 1906-9 and prior to then.	Work contemplated 1909-16.
Anaconda and Rabbit's Foot, War Eagle and Lerai.	Dickson, Puckett & Whitney.	July 11, '99	20	350	10 00	none	.....	7	none.	1907, shafts 60 ft., stripping 750 ft., drift 25 ft.; 1901-2, tunnel 400 ft.	Work contemplated 1909-16.
Pueblo.	Lucas & Kessler.	" 19, '99	250	250	11 00	6	6	6	none.	1907-9, shaft 86 ft., tunnel 155 ft., open cut 100 ft.; prior to 1907 shaft 35 ft.	6 men developing.
Copper King.	Yukon Pueblo Mines, McIntyre & Grainger estate.	July 17, '99	1,400	3,000	12 00	6	.....	5	none.	1907-8, tunnel 250 ft., 3,000 tons ore quarried; 1899-1901, shaft 100 ft., drift 60 ft.	6 men developing.
		Aug. 20, '98	1,600	100	10 00	15	6	10	\$15,000 60 h. p. boiler, 3 drill comp. 15 h. p. engine.	1908, 500 ft. tunnels and drifts; 1907, 100 ft. shaft; prior to 1907, shaft 153 ft., drifts 800 ft.	15 men sinking and developing.
Carlisle.	Yukon Pueblo Mines.	July 6, '99	100	50	10 00	none	.....	22	none.	1906-7, shaft 50 ft.; prior to 1906, shaft 50 ft. and 50 ft. drift.	
Spring Creek.	Mrs. H. G. Dickson.	Aug. 11, '05	10	100	10 00	none	.....	10	none.	1907, shaft 40 feet, drift 20 ft.	
Empress of India.	Kate Ryan.	July 8, '99	6	nil	10 00	none	.....	10	none.	1907-8, drift 150 ft.	
Best Chance.	Aretic Chief Mining Co.	July 25, '00	14	100	8 00	none	.....	20	none.	1907-8, shaft 26 ft., drift 50 ft.; prior to 1907 a number of shallow hole and open cuts.	
Grafter.	Whitney, Lowe & E. A. Dixon.	Aug. 17, '99	2,200	nil	8 00	none	.....	6	\$1,000 5 h. p. hoist, 25 h. p. boiler.	1907, shaft 50 ft., stoped 2,000 tons ore; prior to 1907, shaft 50 ft. and 100 ft. drifts.	
Arctic Chief.	Arctic Chief Co.	July 17, '99	650	600	8 00	12	.....	6	none.	1907-8, tunnel 700 ft., winze 50 ft., stoped 500 tons; prior to 1907, tunnel 300 ft.; 1908, upraise 60 ft.	
Corvette.	Baxter, Whitney & Nicholson.	Sept. 9, '90	nil	100	8 00	none	.....	5	none.	1907, tunnel 30 ft.; prior to 1907, shaft 60 ft. and drift 100 ft.	
Valerie.	A. B. Palmer.	Aug. 23, '96	20	300	8 00	6	.....	5	\$1,000 10 h. p. hoist, 15 h. p. boiler.	1908, shaft 50 ft., drifts 200 ft.; prior to 1908, shaft 50 ft., shaft 22 ft.	
Gold Hill.	J. H. Conrad.	July 7, '06	1	50	20 00	4	\$1500	none.	1908, tunnel 50 ft.; 1907, tunnels 100 ft.	

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Legal Tender...	Mrs. L. Hill....	"	24, '06,	nil	200	20 00	4	35	none.	1908, tunnel 87 ft.; 1907, surface work.
Golden Slipper...	Gso. Stevens....	Aug.	2, '06	nil	25	20 00	6	60	none.	1908, tunnel and drift 80 ft.
Silver King.....	Jno. McDonald.	"	5, '06	nil	50	20 00	5	50	none.	1908, shaft 50 ft.
Tally-Ho.....	C. Irving, et al.	"	5, '06	50	100	20 00	5	80	none.	1908, tunnel 300 ft.
Venus-Mary.....	Yukon District									
Vault No. 2.....	Gold Mining									
Vault.....	Co.....			800	2,000	16 00	45	93.3	gas engines, 3 hoists, 1 air compressor with 10 drills, aerial tram, and concentrator; rating mill; total value \$80,000.	Shafts and upraises 1,145 feet, tunnels, drifts and crosscuts 1,760 ft.
	Yukon District									
	Gold Mining									
M. & M. Ilex...	Co.....			20		16 00	6	60	none.	Tunnels and drifts 590 ft.....
	Yukon District									
	Gold Mining									
Dalton-Arnex & Black Fox....	Co., Conrad.			3	50	18 00	nil	227	none.	Tunnels 134 ft., upraises 40 ft.
	Bristol, Singer & Vance.									
	Vance.			0	0	18 00	0	40	none.	Tunnel 50 feet.

None unless better transportation rates are secured; 180,000 tons ore in sight worth \$20 per ton.

None under present cost of transportation. \$35,000 tram if rates are improved.

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TABLE No. 2.—Continued.

Claim.	Owners.	Date Record.	Ore Shipped.	Ore on Dump.	Cost Trans- portation.	Men Employed 1908-9.	Men Employed 1909-10.	Value of Ore Shipped.	Machinery.	Work done on Claim.	Ore in Sight.	Work Projected for 1909-10.
Uranus, Capella, Uranus No. 2	Yukon District Gold Mining Company.	.....	3	.....	% 20 00	0	.....	% 84 00	None	Drift 300 feet, crosscut 250 feet.	....	To connect mine with mill at 'Venus' by tram. Five mile tram \$100,000; mill \$75,000.
Carlton Group.	Conrad, McKenzie Graces, Bristol.	.....	100	.....	% 15 50	12	.....	% 52 00	1 gas hoist, value \$600.00	Shafts 98 feet and 137 feet, drifts 190 feet and 122 feet.	.....	Will be mined by large force if rates to smelter are satisfactory.
Montana Group.	J. H. Conrad <i>et al.</i>	.....	2	..	% 14 00	0	.....	% 97 00	1 aerial tram, 1 gas hoist and 1 engine and air drills \$102,000.	Shafts 53, 24 and 312 feet, winzes 78 feet, upraise 112 feet, drifts 40, 90, 80, 427 and 42 feet.	.....
Thistle Group.	Conrad & Bristol.	.....	0	.....	% 17 00	0	.....	% 50 00	None	Shaft 52 feet.	.....

NOTE.—Values given are in \$ per ton; where only a few tons have been shipped the value cannot be accepted as the mine run as the shipments have been care-
fully hand picked.

Until recently a \$5.00 ore rate prevailed but this rate has been increased to \$13.50 (from Carcross to smelter). This increase in rate will probably close down
all the Conrad Mines. No property in the Southern Yukon can ship their mine run under the present rates. Unless the old rate is restored it is almost certain that the
work done during the coming year will be nil.

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TABLE NO. 3.—SHOWING DISTANCES BETWEEN POINTS IN WHITEHORSE DISTRICT.

Distances are given following roads and established routes. To reach any two points, one of which is situated in one group and one in another, it is necessary to pass through Whitehorse.

Whitehorse.	Whitehorse.....	0	21	42	54	41	59	43	50	57	Whitehorse.....	0	59	87	117	126	149	132	111	230	Whitehorse.....	0	64	109	141	189	285																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Whitehorse.	Whitehorse.....	21	0	21	33	20	38	22	45	36	Lake Labarge.....	59	0	37	67	129	164	76	53	180	Champsagne Landing...	64	0	45	77	125	231																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Robinson.	Robinson.....	42	21	0	12	41	59	43	24	15	Hootallinqua.....	87	59	0	39	90	127	45	24	150	Bear Creek.....	109	45	0	32	80	184																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Carcross.	Carcross.....	54	43	12	0	53	71	55	29	3	Big Salmon.....	117	87	59	0	60	97	75	54	180	Kluane Lake.....	111	77	32	0	154																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Conrad.	Conrad.....	41	20	41	53	0	18	14	65	53	Tantalus.....	126	129	90	60	0	23	135	111	240	Barwash Creek.....	189	125	80	48	0	106																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Gold Hill ..	Gold Hill ..	59	38	59	71	25	0	20	83	74	Yukon Crossing..	149	166	127	97	23	0	172	151	277	Canyon City (White River).....	295	231	184	154	106	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Carbon Hill ..	Carbon Hill ..	43	22	43	55	14	29	0	67	58	Livingstone Creek..	132	76	45	75	135	172	0	21	147																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

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TABLE NO. 4.—SHOWING FREIGHT RATES TO POINTS IN WHITEHORSE DISTRICT.

	Robinson.	Carcross.	Conrad.	Gold Hill.	Big Bend.	Lower Labarge.	Hootalinqua.	Big Salmon.	Livingstone.	Mason's Landing.	Chamapagne Landing.	Kluane Lake.	Burwash Creek.	Canyon City (White River).
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Whitehorse...	0 64	1 04	1 37	2 64	2 64	0 45	0 60	0 70	3 84	1 55	5 00	15 00	18 00	45 00
{ Summer, per 100 lbs.														
{ Winter, per 100 lbs.	0 64	1 04	1 54	2 00	2 00	3 00	5 00	7 00	5 60	7 00	4 00	10 00	12 00	35 00
Carcross...	0 64		0 33	2 64	2 64									
{ Summer, per 100 lbs.														
{ Winter, per 100 lbs.	0 64		0 50	2 00	2 00									
Hootalinqua...														
{ Summer, per ton.														
{ Winter, per lb.						0 01		0 01	25 00	15 00				
Kluane Lake...									0 02	0 01				
{ Summer, per lb.														
{ Winter, per lb.													0 03	0 33
Teslin Lake...													0 02	0 25
{ Summer, per 100 lbs.														
{ No winter freight.							2 00							

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TABLE D.—VALUE OF UNWORKED PLACER DEPOSITS.

Name of Creek.	No. Claims Held.	No. Men Employed.	Surface Pay Gravel (in cubic yards).	Value per Cubic Yd. \$ c.	Creek Channel Gravel (in cubic yards).	Value per Cubic Yd. \$ c.	Hill Channel Gravel (in cubic yards).	Value per Cubic Yd. \$ c.	Unprospected Gravel (in cubic yards).	Total Pay Gravel (in cubic yards).	Average Value per Yd. \$ c.	Size and Quantity of Available Timber.
Big Salmon Division.												
Livingstone.....	53	45	nil.	nil.	12,000	4 00	4,000	5 00	100,000	16,000	4 50	Enough wood and saw-logs for use of camp are available in Big Salmon District.
Catoneva.....	18	6	nil.	nil.	10,000	3 00	Unprospected.	.....	200,000	10,000	3 00	
Summit.....	15	5	nil.	nil.	10,000	4 00	"	.....	50,000	10,000	4 00	
Little Violet.....	5	.....	nil.	nil.	10,000	4 00	"	.....	50,000	10,000	4 00	
Mendocino.....	2	.....	nil.	nil.	?	2 50	"	.....	500,000	.....	.....
Kluane Division.												
Bullion.....	20	4	10,000	1 00	nil.	nil.	"	.....	1,000,000	10,000	1 00	Limited quantity of fuel and saw-logs available for Sheep and Bullion, 3 to 5 miles from working claims.
Sheep.....	35	10	150,000	1 00	nil.	nil.	"	.....	500,000	150,000	1 00	Coal used for fuel on Sheep.
Fourth of July.....	30	15	50,000	1 00	?	2 50	"	.....	500,000	50,000	1 00	Plenty fuel and limited quantity logs on Fourth of July and Ruby Creeks.
Ruby.....	10	5	10,000	1 00	Unprospected.	.....	"	.....	100,000	10,000	1 00	Very limited quantity fuel or logs near workings on Burwash but plenty below Canyon, available in winter.
Burwash.....	80	30	100,000	1 00	6,000	7 50	10,000	7 50	1,000,000	16,000	7 50	

TABLE E.—CONCERNING ORE BODIES.

Claim.	Width of Ore body.	Strike.	Dip.	Ore in Sight.	Estimated value per Ton.	Principal Metal.	Added Values for.
Whitehorse Belt.....	1 to 200 feet.....	N 20° E to 50° E.	50° N W to 70° N W.	1,200,000 tons.....	\$ 11.00 (copper at 12½).....	Copper.....	Gold.
Watson and Wheaton.....	3 to 20 feet.....	N 45° W.	45° S.	180,000.....	25.00.....	Silver.....	"
Venus.....	3 to 20 feet.....	N 45° S.	45° S.	.....	25.00.....	"	"
Vault.....	1 to 6 feet.....	N 45° S.	30° W.	.....	22.00.....	"	"
M & M.....	2 feet.....	N 45° E.	22° N W.	.....	150.00.....	"	"
Uranus.....	3 to 20 feet.....	N 45° S.	14° W.	.....	50.00.....	"	"
Caribou.....	16 feet.....	E & W.	12° N to 40° N.	50.00.....	"	"
Montana.....	3 to 7 feet.....	N & S.	25° W.	20.00 (?).....	"	"
Thistle.....	2 to 3½ feet.....	N & S.	25° W.	100.00.....	"	"

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TABLE No. 5.—STATEMENT showing the Collections Made in the Office of the Asst. Gold

Month.	MINING DUES.									
	PLACER.				QUARTZ.					
	Grants.	Reloca- tions.	Renew- als.	Registration of Docu- ments.	Grants.	Certificate of Work.	Payment in Lies.	Certificate Payment.	Registration of Docu- ments.	Acreage and Cr'n Grant.
1908.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
April.....	130 00	10 00	.....	37 00	140 00	20 00	100 00	.....	15 50	.....
May.....	.....	60 00	42 00	7 00	30 00	57 50	.....	5 00	9 50	.....
June.....	.....	20 00	15 00	28 00	110 00	60 00	.....	12 50	10 00	.....
July.....	70 00	50 00	275 00	99 00	35 00	45 00	300 00	5 00	55 00	189 48
August.....	.....	.....	10 00	10 00	20 00	67 50	.....	5 00	50 00	.....
September.....	.....	.....	300 00	26 00	30 00	62 50	.....	.....	7 50	.....
October.....	.....	20 00	150 00	43 00	20 00	32 50	.....	5 00	7 50	160 95
November.....	.....	.....	.....	8 00	20 00	17 50	.....	5 00	7 50	124 31
December.....	.....	30 00	120 00	4 00	25 00	23 50	.....	.....	17 50	73 50
1909.										
January.....	.....	.....	.....	12 00	20 00	17 50	.....	2 50	17 50	228 52
February.....	.....	20 00	.....	.....	105 00	27 50	.....	.....	55 00	.....
March.....	.....	.....	60 00	.....	5 00	7 50	.....	.....	.....	.....
Total.....	200 00	210 00	972 00	274 00	560 00	437 50	400 00	30 00	252 50	776 78
Number of re- ceipts issued.	20	21	61	64	97	174	4	12	88	36

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Commissioner and Crown Timber and Land Agent During the Fiscal Year 1908-9.

Dominion Lands Receipts.	TIMBER AND LAND DUES.			EXPORT TAX.			TOTAL FOR MONTH FOR	
	Timber.	Seizure.	Coal.	Home- stead.	Royalty.	Free.	1908-9.	1907-8.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
221 77							674 27	4,160 88
3,365 08	137 50	1,000 00	15 00		24 38		4,752 90	1,132 00
277 77	55 00				259 21		837 48	1,600 34
176 51					152 80		1,452 79	1,276 48
264 90				10 00	511 04		948 44	1,246 15
472 91	200 00	1,000 00			112 03	1 00	2,271 94	1,152 19
657 54	251 25				570 14		1,917 88	1,790 51
163 62	282 50				45 40		673 89	509 50
149 65	335 00	1,000 00			50		1,777 67	608 10
							298 02	215 81
158 18	200 00				39 80		665 48	558 00
285 88	255 00						613 38	853 25
6,193 81	1,836 25	3,000 00	15 00	10 00	1,715 30	1 00	16,884 14	15,109 71
48	16	3	3	1	49	1	698	

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TABLE NO. 6.—STATEMENT showing the Collections made in the Office of the Mining Recorder for the Conrad District during the Year 1908-9.

	QUARTZ MINING DUES.						Total for 1908-9.	Total for 1907-8.
	Grants.	Certificate of Work.	Certificate of Part- nership.	Payment in Lieu.	Registra- tion of Docu- ments.	Acreage Crown Grant.		
1908.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
April.....	10 00	12 50	5 00		26 00		53 50	30 00
May.....	5 00	7 50		100 00	2 50		115 00	47 50
June.....	30 00	57 50	22 50	200 00	17 00		327 00	321 00
July.....	60 00	235 00	5 00		60 00		360 00	336 00
August.....	75 00	187 50		900 00	30 00	242 88	1,435 38	884 50
September.....	115 00	45 00		200 00	32 50		392 50	255 00
October.....	50 00				62 50	848 58	961 08	55 00
November.....	5 00	20 00			30 00		55 00	41 50
December.....		5 00			2 50		7 50	18 00
1909.								
January.....		5 00			5 00		10 00	104 50
February.....					15 00	56 65	71 65	22 50
March.....		12 50			35 00		47 50	202 50
Total.....	350 00	587 50	32 50	1,400 00	318 00	1,148 11	3,836 11	2,319 00
No. receipts....	70	201	13	14	73	54	425	.....

PART VII

FORESTRY AND IRRIGATION

FORESTRY AND IRRIGATION.

REPORT OF THE SUPERINTENDENT OF FORESTRY AND IRRIGATION.

DEPARTMENT OF THE INTERIOR,

FORESTRY BRANCH,

OTTAWA, May 25, 1909.

W. W. CORY, Esq.,

Deputy Minister of the Interior,
Ottawa.

SIR,—I have the honour to submit the report of the work of the Forestry and Irrigation Branch for the year 1908-9 and also the reports of the officials in charge of the different divisions of the work.

ORGANIZATION.

The only addition to the technical staff of the Forestry Branch during the year was made in the Tree Planting Division by the addition of Jas. Kay and Jas. N. B. McDonald to the staff of inspectors.

The hydrographic survey was given a separate organization with Mr. P. M. Sauder in charge. Mr. Sauder has had charge of one of the parties making inspections under the Irrigation Act and conducting stream measurements during several years and has shown himself competent.

Mr. H. R. Carscadden and Mr. H. C. Ritchie have been appointed assistants for the hydrographic survey.

Mr. J. S. Tempest was appointed to take charge of the inspection work formerly done by Mr. Sauder.

The death of Mr. R. S. Cook, Crown timber agent at Prince Albert, is greatly to be regretted and will be a decided loss to the forest service, as he took a great interest in the protection of the forests and the adoption of improved methods of administration. It was on his suggestion that the fire patrol was extended to Churchill river last year and that an effort is being made to enlist the interest of the Indians.

An important change in administration has been made by providing for the handling at the office at Indian Head of all applications for trees for planting. Formerly all such applications were received at the head office at Ottawa and dealt with here. It was felt that it would be an economy of time to have the applications sent to Indian Head, and that the inspectors who visited the different districts would be best qualified to deal with these applications and to give any necessary explanations in special cases. An office for this purpose has therefore been organized at Indian Head and it is hoped that it will increase the promptness and efficiency of the service.

The work of the Forest Service of the United States is spoken of in the highest terms of praise and with good reason, but it may be pointed out that, although the extent of Canada is not less than that of the United States, the forest service of the latter has an appropriation of \$4,640,000 and a permanent staff of over 2,000, while the Canadian forest service has an appropriation of \$100,000 and a permanent staff of about forty. If the Canadian people wish a service equally efficient with that of the United States they must be prepared to deal much more generously with it than they now do.

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In May of last year I accompanied Dr. W. F. King to Washington in connection with the discussion of the terms of agreement for the division of the waters of St. Mary and Milk rivers between the United States and Canada, and also accompanied Mr. Geo. C. Gibbons to Washington for a similar purpose in December.

During the summer I visited the various districts of the West where the work under charge of this branch is located and consulted with the officers in charge. I also attended the Second Canadian Irrigation Convention held at Vernon in August. The discussions at the convention were very interesting, but related mainly to the administration of irrigation in British Columbia and a proposed revision of the Act governing the subject in the province.

In December I accompanied Hon. W. C. Edwards to the meeting of the Internal Harbours and Waterways Convention and also the Conservation Convention held at Washington.

STATISTICS.

Mr. A. H. D. Ross, lecturer at the forest school of the University of Toronto, was appointed during last summer to collect such statistics as were available in regard to the forests and the timber production of Canada, and the result of his investigations is being published. The reliable information was found to be so small as to leave all calculations incomplete and indefinite. The forest area may, however, be put at between 500 and 600 million acres with a stand of about as many billion feet, but neither these nor any other figures available are entitled to any great reliability in the present state of knowledge of the forests of Canada. The production of timber in Canada in 1900, according to the last census, was about nine billion feet board measure. This quantity has probably increased, but there are no later figures to determine the matter. The conclusions reached in regard to the whole matter were as follows :—

1. In order to have reliable information in regard to the forest resources of Canada it is necessary that forest surveys should be begun and systematically carried out by the Dominion and provincial governments on the forest lands under their control, respectively.

2. Statistics in regard to the production of timber in Canada should be collected annually by the Forestry Branch in conjunction with the Census Bureau and published for the information of the public.

3. Official returns in regard to timber production should give more detailed information in regard to species.

In accordance with the second suggestion steps have been taken towards compiling a list of names of firms using wood products throughout Canada, and circulars asking for the desired information have been sent out to all parts of the Dominion. It will take several years to get the lists fully completed and to have the purposes of the inquiry so understood that information will be given willingly and without reservation. The results will, however, be published from year to year, whether at first they can be made complete or not.

FOREST SURVEYS.

Forest surveys are of different characters. The simplest is the exploratory survey. Such a survey is required for the whole of the northern forested districts. The fact may be again emphasized that there is a large tract of land more or less forested stretching from Hudson bay to the Rocky mountains, a distance of 1,000 miles, and having a general depth of 400 miles, which is under Dominion administration, and that the forest on this tract is of great value for local consumption. It has already suffered greatly from fire and the timbered areas that remain should be carefully protected. In order to do so effectively and economically more definite

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information is necessary as to their location and this would be obtained by an exploratory survey. All of this tract has been travelled along certain lines by members of the Geological Survey staff and other explorers, but their travels have followed canoe routes and fixed lines of travel, and large areas are still left uninspected.

The province of Ontario explored its northern forest area of sixty million acres in 1899 at a cost of \$40,000. A similar exploration of the northern forested area under Dominion control, which comprises about five times the extent of territory, could be made on similar lines for \$200,000, or \$20,000 for ten years. Such an exploratory survey is not beyond the resources of the Dominion and is absolutely necessary for an intelligent management of this extensive district.

Following the exploratory survey and the location of the timbered lands and non-agricultural areas, a more careful examination of the timber would be made by reconnaissance survey as it became necessary, as is now being done on the forest reserves. Such a survey gives information as to the species, the stand and the condition of the timber, the topography, and matters generally that affect the management of the forest and the handling of the timber.

Timber surveys on the forest reserves were continued during the past year, and about one million and a quarter acres of the ten million in forest reserves and parks have now been surveyed. The results show that the reserves, so far as the survey has extended, are in poor condition, the result of fire and careless cutting, and a long course of careful management will be required before they are brought into proper forest condition again. The survey is the first step toward that end. Having a knowledge of the condition and location of the forest stands, their accessibility, the possibility of their utilization, and the extent to which natural reproduction is providing for the replacement of the stand, it is possible to pursue an intelligent plan in the handling of the timber and the administration of the reserve.

Plans for the management of the reserves which have been surveyed will be prepared and it is hoped that, with proper protection and management, they will in time be brought into good producing condition again. But the process will be slow and will take many years to accomplish. The records of growth of white spruce, for instance, on the Riding Mountain reserve, which may be taken as a reasonable average, show that it has taken 75 years for trees of this species to reach a diameter of ten inches. The sooner, therefore, that the process of reproduction can be begun the better.

The surveys of the forest reserves should be continued systematically until the whole area has been covered.

FOREST RESERVES.

The survey of the Riding Mountain Forest reserve was continued under charge of Mr. J. R. Dickson and was practically completed. A full report of the results of the survey of this reserve, and a map showing the location of the timber have been prepared and published separately. Of a total area of 982,400 acres in this reserve, only 221,319 acres are described as timbered. The timber of over eight inches in diameter at breast height is 210,740,346 feet board measure, and of this poplar forms 54 per cent and white spruce only 20 per cent. There are only a little over 42 million feet board measure of white spruce. This reserve is one of those on which there is the greatest demand for timber and wood and every effort will be made to assist reforestation. Unfortunately the natural reproduction of white spruce, the most valuable tree, is not good, and it will be necessary to resort to sowing or planting if this species is to be reproduced as it should be.

The protection of the timber and the administration of the reserve will be facilitated by the removal of a number of squatters who had located on this reserve. These, to the number of 126, were induced to remove from the reserve, and that this was

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accomplished successfully without serious friction and leaving these people on the whole well satisfied, as many of them have attested by statements over their own signatures, reflects great credit on the inspector and forest rangers who carried out this work.

A reconnaissance survey was made of the Pines Forest reserve, a tract of 145 square miles, situated south of the North Saskatchewan river, southwest from Prince Albert. This reserve is mostly light, sandy land, with some muskeg, and was covered with a forest of jackpine, with spruce and tamarack on the lower ground. This tract has furnished a large supply of ties for railway construction; from it lumber was secured to build many of the houses in the neighbourhood, and it has supplied fuel not only to the vicinity but to the towns on the prairie farther to the south. Thirty years ago the reserve was heavily timbered. The contractors twenty years ago left a heavy slash; following this fires from the railroad and settlements swept it clean until now there is not an acre left but is burned over or cut over. Scattered in patches there are 45,000 cords of fuel, 15,000 of which are dead. This supply will not last ten years. This whole tract is unsuited for agriculture, but can produce a good growth of timber, and with adequate protection from fire and reasonable care in cutting, the task would not be difficult as the jackpine produces a good seed supply which germinates readily. On some 23,000 acres there is a good reproduction of young jackpine.

North of the North Saskatchewan river, and running east to a considerable distance beyond Prince Albert, is an extension of the same sandy tract covered with jackpine forest in various stages, some mature, some covered with reproduction of various ages and some recently burned. If this tract is opened to settlement it will mean disappointment to those who attempt to make homes upon it; it will mean the destruction of the forest, which would be of great benefit to Prince Albert and the district both for wood supply and shelter; it will mean a waste of shifting sand useless in itself and a menace to the good land surrounding it, and will in the end require action such as is now being taken by the province of Ontario to buy back and reforest such lands. It would be a desirable policy for the Dominion government and the city of Prince Albert to unite in maintaining this tract as a municipal forest reserve.

The Spruce Woods reserve in Manitoba covers a sandy tract, and as there is a considerable area of land of similar character in the vicinity an inspection was made of it and it is proposed to increase the area in this reserve. An addition has also been proposed, after inspection, to the Beaver Hills Forest reserve.

CYPRESS HILLS.

The Cypress Hills form the most important elevation in southwestern Saskatchewan and southeastern Alberta and located, as they are, in a district where the rainfall is frequently deficient and where irrigation is generally practised, the necessity for the preservation of every favourable influence on moisture conditions is apparent. This district will be the home of the small rancher who will assist and ensure his fodder supply by means of irrigation. The greater moisture on the hills is demonstrated by the fact that while, during the dry season of the last year, there was practically no hay crop on the lowlands, the hay on the Cypress Hills was the only supply that saved the situation for many of the ranchers in the vicinity. A small forest reservation of one-half township was made in 1906 and last summer a general examination of the hills was made by Mr. A. Knechtel, inspector of forest reserves, to determine what further and other lands should be reserved. A considerable addition was recommended and these lands have been temporarily reserved pending a further inspection. There will be no difficulty in covering the greater part of the Cypress Hills with a good growth of lodgepole pine and spruce and the great advantage of a forest on

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these hills in the conditions which exist will more than justify every effort to restore their forest-clad condition and indeed imperatively demands that such action should be taken.

CROWSNEST PASS.

One of the most interesting investigations made during the past season was that in the Crownsnest district made by Mr. H. R. MacMillan. The eastern slope of the Rocky mountains, the source of the great river systems that water most of the western prairie country, presents one of the most interesting studies to be found in the Dominion. The forests on these great mountain slopes assist in preserving the water supply and form the reservoir for wood and lumber for the province of Alberta, one of the greatest assets for comfort and happiness that any province can have, and, moreover, on it depends largely the development of coal mining in that province, as without timber, coal mining is impossible, and the requirements for the development of the coal mines along the eastern slope of the Rocky mountains will be enormous. It is estimated that there are twenty-two and one-half billion tons of coal to be found in Alberta in the Rocky mountain district. The mining of such a quantity of coal will require 45 billion lineal feet of mining props, the product of nine million acres for sixty years.

In the Crownsnest valley the mines now in operation are using three million lineal feet of mining props and two and one-half million feet board measure of lumber and dimension timber, and in five years more this quantity will probably have doubled, then requiring the product of 66,000 acres. The total area in this valley is 135,680 acres, of which only 21,120 acres are covered by a mature unburned forest, the remainder being entirely denuded, covered with dead standing timber or with young growth. The worst fires occurred fourteen years ago, about the time the railway was built. The loss by fire was probably 570 million feet board measure of lumber worth \$9,000,000. The timber for the future needs of the coal mines of the Crownsnest is not in sight in that valley as a result of this great destruction by fire, and it is necessary that the most careful attention should be given to this district and the whole eastern slope of the Rocky mountains to ensure that the forest cover so absolutely necessary from so many points of view should be preserved.

A more thorough and efficient fire patrol system is required and in order to organize and distribute it as economically as possible, and to administer the forests on an intelligent basis a timber survey and mapping of the whole eastern slope should be made with the least possible delay.

MINING CLAIMS.

As application had been made for coal lands within certain of the forest reserves, and it was not the intention in the establishment of the reserves that the working of valuable minerals which might be found located therein should be prevented, it was decided to grant mining leases under the Mining Regulations, subject to the following additional restrictions :—

1. No lease for coal mining rights within a forest reserve shall be granted until the application has been reported upon by the superintendent of forestry.

2. No lease for coal mining purposes shall entitle the lessee to purchase the surface rights, but the lessee may, upon application, be granted a lease, concurrent with that for the coal mining rights, for such portion of the surface rights thereof as the Minister of the Interior may consider necessary for the efficient and economical working of the coal mining rights granted under such lease.

3. That the lessee will do no unnecessary damage to timber and will carefully observe all the provisions of all regulations relating to forest reserves.

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4. That no trees on the reserve will be cut by him without the permission of the superintendent of forestry, and that when any trees are cut by him he will carefully clear the ground of all tops and branches and other debris of such cutting, and will so dispose of them as to prevent danger from fire in accordance with the instructions of the officer in charge of the reserve. If in order to so dispose of such debris it is necessary to burn it, the lessee shall give due notice of his intention so to do to the officer in charge of the reserve, and before he proceeds to burn such debris shall obtain the consent of such officer, and shall comply with all the conditions imposed by such officer in regard to such burning.

5. That the lessee shall clear and at all times keep clear of inflammable material a space of at least one hundred feet in width surrounding his works or operations.

6. That any engine operated by the power of steam used by him in connection with his works or operations shall be fitted with efficient spark arresters which shall at all times be kept in a state of good repair.

Similar regulations were established for other classes of mining claims in forest reserves and for such claims within timber limits.

SUMMER RESORTS.

A great many people are resorting to the forest reserves for holiday outings during the summer, and it is considered that this is not only a legitimate use of the reserves, but that the presence of such people, wholly in sympathy with the purposes of the reserves, will be a great assistance in case of fire. Regulations for dealing with the use of the reserves for such purposes have been prepared and a copy is attached hereto.

FIRE RANGING.

The season of 1908 will be long remembered as one of the dry seasons, and it was only the fortunate absence of high winds that prevented its being one of the most disastrous for forest fires.

Throughout the province of British Columbia the same dry conditions prevailed and unfortunately they were accompanied at times by high winds so that the worst fires chronicled for the Dominion occurred in that province. In the northern forested districts of the prairie provinces fortunately the season was not so dry and there was less danger of fire.

The most serious fires which occurred on Dominion lands were at Salmon arm, Manson creek and White lake, due to fires set by settlers, and the latter partly due to fire from a logging engine used by a lumber company. The loss in these fires was 200,000 feet board measure of timber totally destroyed and 10 million feet damaged. It will be seen from this that the lumber companies are sometimes careless in regard to fire, and the example quoted is not by any means the only one of carelessness on their part. Some firms seem to consider that the government is entirely responsible for the protection of their timber and that they do not need to take any interest in the matter. The other two fires referred to are an example of the result of encouraging encroachment by squatters on timber berths and point to the necessity for a revision of the procedure in this respect and a proper understanding with the licensees in regard to the clearing of lands fit for settlement.

Outside of the loss of timber occasioned by these fires there was a direct expenditure of \$3,122.34 in fighting them.

Another serious fire was that in the valley of the Spray river in the Rocky Mountains Park. It is supposed to have been started by a party of tourists, although it was impossible to get sufficient evidence to establish the fact, and burned about three million feet of timber. A more efficient patrol of the park is being provided for during the coming season.

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The total number of rangers was 82, distributed as follows :—British Columbia, 35; Alberta, 34; Saskatchewan, 13.

The patrol was extended in the northern districts. One ranger was placed north of The Pas, the present terminus of the Hudson Bay Railway. In the country north of Prince Albert a patrol was carried on up to the Churchill river, comprising Lac la Ronge, where considerable mining excitement prevailed, with a consequent influx of prospectors. In addition to the staff on the Athabaska and Lesser Slave rivers, rangers were placed on the Peace and Great Slave rivers, thus reaching the most important routes of travel.

While this might seem to indicate that the patrol of this northern district is well provided for it will be seen on reference to the map accompanying this report that there are large tracts as yet entirely unreached, while the districts assigned to rangers cover routes of travel as much as two hundred miles in length. It must be realized that the district to be protected stretches from Hudson Bay to the Rocky mountains, a distance of 1,000 miles, with a width from 300 to 600 miles, and that a patrol of 37 men is a mere handful and utterly inadequate to the task to be accomplished. Some of the most important points and routes of travel are entirely unprotected, as for instance, the whole district surrounding and north of lake Winnipeg to Hudson Bay, the whole valley of the Churchill river and a great part of the Peace and Mackenzie river districts. If the forests of this great region, so absolutely necessary to a northern district, a great portion of which is not even provided with coal, are to be preserved, an appropriation sufficient to provide an efficient and comprehensive patrol must be given, and the interests involved would thoroughly justify the expenditure.

A special patrol was maintained during last season along the line of the Grand Trunk Pacific Railway and as a result no serious fire occurred. As provided for by the Forest Reserve Act one-half of the expenditure within five miles of the line of construction was assessed against the railway company and has been paid by it.

The projection of numerous other lines of railway into the northern districts makes it imperative that every possible precaution should be taken to prevent the destruction by fire of such forest as remains. It is unfortunately true that large areas of land in the northern country once well forested with mature timber are now but a waste as a result of fires started by human agencies, of which the railway has been one of the most destructive.

To provide for the proper protection of the forests it will be necessary also to enlist the interest of the Indians. With this purpose in view a fire notice in the Indian syllabic in both Cree and Chipewyan was obtained from some of the northern missionaries and has been printed for distribution. Facsimile of the notice in Cree with a translation in English is appended. Communication was opened with some of the missionaries to the Indians to enlist their sympathy, and it was proposed to have representatives of the department visit the principal meeting places of the Indians during the summer to discuss these questions with them. Owing to an insufficient appropriation it is unlikely that this plan can be carried out.

TREE PLANTING DIVISION.

The tree planting division is now well established and organized, and as its advantages are understood and appreciated it will require mainly development along the lines already successfully followed to meet the growing needs and increasing population of the prairie provinces.

In the distribution for the spring of 1909, 2,010 applicants were supplied, 2,570,000 trees being provided for this purpose. The new applications received for the distribution of 1910 number 2,235.

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Up to the present time no general distribution of coniferous trees has been made owing to the difficulty of handling and working up a stock. It is hoped, however, to be in a position to begin the distribution of coniferous trees in 1911. The species which will be provided in largest numbers are white spruce, jackpine, lodgepole pine and Scotch pine. The native tamarack is one of the most satisfactory of the coniferous trees and a stock of this species will be developed as soon as possible.

Other varieties of coniferous trees are being tested, including species from Europe and Japan, as well as those from the United States and native species.

DOMINION PARKS.

The Dominion parks as distinguished from the forest reserves are the following:—

Rocky Mountains Park, located on the eastern slope of the Rocky mountains, along the main line of the Canadian Pacific railway, comprises an area of 2,880,000 acres. It was first set apart by an Act of parliament passed June 23, 1887, and its area was greatly extended by an amending Act dated 1902.

Yoho Park corresponds on the western slope of the Rocky mountains to the Rocky Mountains Park on the eastern slope. It was set apart by Order in Council, dated December 14, 1901, and comprises an area of 530,000 acres.

Glacier Park is the heart of the Selkirk range. It was established by Order in Council of October 11, 1888, and extended by an order, dated November 26, 1903, and comprises an area of 368,640 acres.

Jasper Park corresponds on the line of the Grand Trunk Pacific Railway to Rocky Mountains Park on the line of the Canadian Pacific Railway. It was established by Order in Council of September 14, 1907, and comprises an area of 3,200,000 acres. This park has not yet been organized.

Elk Island Park, lying east of Edmonton, was established July 13, 1906, and comprises an area of 10,240 acres.

Buffalo Park was set apart by Order in Council, dated March 7, 1908, and comprises an area of 101,760 acres. It is located in the eastern part of Alberta in open and bluffy country specially suited for a buffalo run.

The changes that have been made in the organization of the Dominion National Parks are the removal of Mr. O. D. Hoar, Superintendent of Yoho Park, and the appointment of Mr. E. Ellis as superintendent of Buffalo Park.

The regulations governing the parks have been consolidated and amended so as to provide for more thorough administration and more complete fire and game protection. Provision was made for the appointment of fire and game guardians, whose duty it will be to see that the regulations are enforced. No person will be allowed to carry firearms in the parks unless they have been properly sealed by the superintendent or other officer, and the licensed guides as well as the game guardians will be responsible for seeing that this regulation is enforced.

The fence surrounding the Buffalo Park was satisfactorily completed. It is a substantial structure, 74 miles long, consisting of fourteen strands and nine feet in height. It is sufficiently strong to be a safe inclosure for the buffalo and the park should form an ideal place for the Canadian herd.

It was expected that the remainder of the buffalo purchased from M. Pablo of Montana would have been brought over last fall, but unfortunately the attempt to corral the herd ended in failure. It is proposed, however, to have this herd brought over during the coming season and the herd at Elk Island Park, with the exception of a small number, will also be transferred to Buffalo Park. The latter herd is reported in good condition, having come through the winter successfully. There is a gratifying increase in number which assures the perpetuation of the stock.

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ST. LAWRENCE ISLAND PARK RESERVATION.

This reservation consists of eleven islands and a small peninsula on the St. Lawrence river between Brockville and Gananoque. These islands were formerly owned by the Mississagua band of Alnwick, from whom they were purchased and transferred to the Department of Interior by Order in Council in 1904 to be held for public use. Pavilions have been erected on six of these islands and they have been equipped with stoves, tables, benches, &c. The pavilions have recently been repaired and painted and furnished with additional conveniences. This reservation for public use is of great benefit and gives the opportunity for pleasant outings for thousands who would not have had access to the islands if they had been disposed of to private persons.

IRRIGATION.

During the year just closed there has been a marked decrease in the number of applications for water for irrigation purposes, and an equally notable shrinkage in the number of applicants to purchase land under the irrigation system. This is due, probably, to two main causes: first, the adoption on January 2, 1908, of new regulations which require the actual irrigation of fifty per cent of all lands purchased under the irrigation system, instead of twenty-five per cent as formerly; and second, to the provisions of the amended Dominion Lands Act permitting the acquirement by settlers of land by pre-emption or purchase, in addition to that acquired by homestead entry. A third, and perhaps equally important cause, is the fact that the valleys of the principal streams are now pretty well settled and the available water supply largely appropriated, thus making it necessary to construct larger and more expensive ditches if the remaining available water supply is to be utilized by means of reservoirs and applied to the higher lands adjoining the settled valleys. The cost of such works is usually beyond the means of the average settler.

In so far as irrigation has developed in the so-called semi-arid district, which comprises southern Alberta and southwestern Saskatchewan, the tendency has naturally been to acquire the easily-irrigable lands in the valleys, either by homestead entry or by purchase under the irrigation system, or by both means, and to secure a water right from the nearest stream. As these lands are low and fairly level, irrigation ditches can be built at moderate cost and a fair proportion of the land brought under the ditch. The result has been the settlement of the more desirable valley lands, leaving the equally productive bench lands undeveloped, owing to the higher cost of bringing water to them. Usually each irrigator owns his own system of ditches independently, but there seems to be a gradual realization by the settlers that better results can be obtained by co-operation in building larger ditches following a higher level, from which laterals or subsidiary ditches can be run to the lands of each co-owner. By this means a much larger acreage can be irrigated than by the independent system and the proportionate cost of construction and maintenance should also be less if proper care is exercised in laying out the ditches. It naturally follows that still larger areas, and a larger proportion of the land, can be irrigated and the available water supply utilized to better advantage, by co-operation on a still larger scale. The main obstacle in the way of such development is the fact that the higher lands are as yet sparsely settled and the settlers are practically strangers to one another. Co-operation under existing conditions may scarcely be looked for at present, but may come later.

As co-operative ditch construction is not likely to be extensively practised in the near future, and as there are several large tracts of land unsuitable for settlement without irrigation, the policy has been adopted of disposing of large blocks of land to persons or companies, at a low price, subject to agreements to construct works for the irrigation of not less than twenty-five per cent of the area sold and to dispose of the land and water rights to actual settlers on terms satisfactory to the Minister of the

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Interior, or specified in the agreements. One such project, the canal system of the Alberta Railway and Irrigation Company, is in successful operation, and another, the Southern Alberta Land Company, has now been authorized and the contract has been let for the main diversion canal.

The Southern Alberta Land Company.

This company has been given permission to purchase some 380,000 acres between the Bow and Belly rivers and eastward from the junction of those streams towards Medicine Hat, and has been given the right to divert 2,000 cubic feet of water per second from the Bow river, during high water and flood stages of the stream only—the low water flow of the stream being already appropriated for other irrigation projects. As the diversion of water is limited to the high and flood stages of the stream it will be necessary, if the flow at low water is used by the first licensees, to divert a very large volume of water during the months of June and July of each year, and to store it for use during the later summer and autumn months and for use during the earlier part of the following spring. Fortunately the high-water flow of the Bow continues for a longer period than that of most of the rivers in the semi-arid tract, but notwithstanding this it will be necessary to construct a diversion canal of very large dimensions. This water is to be stored in a reservoir in Snake valley, to be known as Lake McGregor, so named in honour of the manager of the company. From this reservoir a canal will be built eastward to the tract to be irrigated and thence distributed by secondary canals and ditches to each farm. As a portion of the tract to be irrigated lies east of the Bow river it is the intention of the company to carry the water to the eastern tract by means of an inverted siphon.

Under the terms of the agreement the company is required to irrigate not less than twenty-five per cent of the lands purchased, or 95,000 acres. The quantity of water they are authorized to divert is sufficient, according to the present 'duty of water,' for the irrigation of 300,000 acres, if it could all be applied directly to the land. Allowance must, however, be made for seepage and evaporation and, as the water must be carried a long distance and stored in a reservoir for some time, these losses will be heavy. The loss by seepage will not be altogether wasted, as it will benefit the lands through which the canal passes, whether they are controlled by the company or not. It is the intention of the company to irrigate the largest possible percentage of the tract sold, as the larger the area irrigated the greater the profit to them from the sale of land. If the quantity of water reserved proves to be greater than the company can supply to beneficial use on the lands sold to them they will be required to dispose of the surplus to any whose lands can be served by their ditches.

Alberta Railway and Irrigation Company's Irrigation Project.

The Alberta Railway and Irrigation Company is the pioneer company in irrigation in Canada. Authorization was granted to the Alberta Irrigation Company in May, 1899, to divert water from the St. Mary river and other sources in southwestern Alberta and to construct a system of works for the irrigation of lands held by the Alberta Railway and Coal Company as part of their land grant. These lands lie between the line of the company's railway and the St. Mary river in the southern part of the province. The name of the company was subsequently changed to the Canadian Northwest Irrigation Company and, in 1904, by the amalgamation of this company with the Alberta Railway and Coal Company, the Alberta Railway and Irrigation Company was formed.

On October 22, 1902, authorization was granted to the last mentioned company to divert an additional quantity of water, and in December of the same year they

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were permitted to purchase a tract of 500,000 acres lying to the east of their land grant holdings. They were given a period of fifteen years from October 23, 1902, within which to complete their irrigation system. The following quantities of water have been granted to the company for irrigation purposes :—

Belly river, low water, 500 second feet.

St. Mary river, low water, total flow (about 600 second feet).

St. Mary river, high and flood, 2,000 second feet.

Milk river, low water, 500 second feet.

Milk river, high and flood, 1,500 second feet, and all the available water in certain minor streams in the vicinity of the lands to be irrigated.

The company at an early date took steps to colonize the lands tributary to their projected ditches and, as irrigation was then a new venture in Canada, they were instrumental in bringing in a number of Mormons and other settlers from the irrigation districts of the United States to settle upon and cultivate the lands. As a result of this policy several towns were established in the irrigated district and experience has proved the value of irrigation. Lands formerly used only for grazing now produce bountiful crops of many kinds and the culture of sugar beets has become a thriving industry. The towns of Raymond, Magrath and Stirling are the direct result of this irrigation enterprise and colonization scheme, and Cardston has also greatly benefited by the scheme.

Lands are sold by the company at \$5 per acre, without water rights, and from \$30 per acre with such rights. An annual charge of \$1 per acre is made for water, in addition to the price of the water right sold with the land. The water rights are appurtenant to the lands sold but are not perpetual and may be forfeited by non-use for two consecutive years.

There is a very large, but as yet undetermined, area of irrigable land in the district to which the works might profitably be extended, if the supply of water were sufficient, but the land available is greater than the water supply. A considerable portion of the tract irrigable from the constructed or projected canal system of this company was held by the company as a part of their railway land grant and it is upon these lands, now in private ownership, that the greatest development has so far taken place. It is proposed to extend the canal system eastward and to provide for the irrigation of as much land as the available water supply will permit.

Some 231 miles of canals have already been constructed, including 57 miles of natural channels used for the same purpose. The main canal has a capacity of 1,400 cubic feet of water per second. Distributing ditches are not included in the mileage mentioned as, under this company's system, such ditches are constructed by the water users, the company only building the canals and main laterals. The amount expended by the company on their canal system is about \$1,300,000.

A very profitable beet-sugar industry has been developed in the district tributary to this canal system; a factory costing in the neighbourhood of half a million dollars has been constructed and some 400,000 tons of beets are grown annually. Sugar-beets are also grown on the irrigated lands of the Canadian Pacific Railway Company, and a carload recently shipped from there to the factory at Raymond tested eighty-eight and one-tenth per cent for purity and nineteen and two-tenths of sugar in the beet. It is contended that the farther north the beet can successfully be grown the greater will be its purity and saccharine contents. The annual output of the Raymond factory is about five million pounds of sugar.

Canadian Pacific Railway Company's Irrigation Project.

The Canadian Pacific Railway Company have been given permission to consolidate a portion of their land grant and to acquire all the available lands (instead of alternate sections only) within a tract lying along the line of their railway eastward

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from Calgary, Alberta, and north of Bow river. This tract is approximately fifty miles wide by one hundred and fifteen miles long, and comprises some 3,000,000 acres. They have been given permission to divert water from Bow river, as follows :—

	Second feet.
At low water..	3,000
At high water..	13,000
At flood water..	18,000

This quantity of water will be sufficient to irrigate, according to the present 'duty of water' :

	Acres.
At low water..	450,000
At high water..	1,950,000
At flood water..	2,700,000

By means of storage reservoirs within the tract the company will probably be able to conserve and use sufficient water for the irrigation of some 2,000,000 acres, and surveys already made indicate that about this acreage is irrigable.

For convenience of operation this tract has been divided, by north and south lines, into three divisions of about equal area, but lands are at present sold in the western division only. This division lies immediately east of the city of Calgary and is being rapidly settled. The main and secondary canals have been constructed through most of this division, and work is being rapidly pushed on the laterals and distributing ditches, and no difficulty seems to be found in selling the lands when the ditches are constructed. One of the main ditches has been constructed for some distance across the second, or central, division of the tract and work is being pushed on this also.

The company have been given fifteen years from April 21, 1904, within which to complete their works and secure license for the water, but are permitted to use water during construction. Lands are sold at from \$15 per acre for non-irrigable to from \$25 to \$30 per acre for irrigable lands in most parts of the tract now for sale. The irrigable area on each parcel is determined by survey before sale is made. The purchaser agrees to pay to the company 50 cents per acre annually as water rates for the irrigable portion. This contract is perpetual and the water right is appurtenant to the land sold and to no other land and may not be sold, or transferred separately from the land.

The land comprised in this tract is high, rolling prairie and there are few perennial streams or other permanent bodies of water that might be of use for irrigation purposes. The Bow river flows along the entire southern boundary of the tract and the Red Deer and Rosebud rivers along its northern boundary. The Bow and Red Deer rivers flow in deep valleys and are therefore of little value for irrigation purposes without the construction of extensive works involving the expenditure of sums entirely beyond the means of settlers. The annual rainfall varies from eight to thirty-four inches, with a mean of seventeen inches for the past twenty years; the greater portion of this falls in the growing season from May to July. The soil is, on most of the tract, well suited to agriculture and the climate compares favourably with that of southern Manitoba and southeastern Saskatchewan where the country is well settled and crops are successfully grown without irrigation. Before this irrigation project was undertaken this land was used almost solely for grazing purposes and supported a very sparse population. With irrigation it is believed to be capable of supporting as large a population as any similar area of farming land elsewhere in Canada, and the crops already produced will compare favourably both in quantity and quality with those grown elsewhere.

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The estimated cost of these works is \$5,000,000, and the total length of the canal system, including distributing ditches will be in the neighbourhood of 2,900 miles.

The Aylwin Scheme.

Mr. F. P. Aylwin has been permitted to purchase a tract of some 69,000 acres in townships 14, 15 and 16, range 17, and township 14, range 16, west of the fourth meridian, subject to the construction by him of works for the irrigation of at least one-fourth of the area purchased. Authorization has not yet been granted for the construction of the works.

The agreement for the sale of the land is similar in most respects to other agreements that have been made for the same purpose. No restriction is placed upon the price at which the lands may be sold to settlers, but the annual rates to be charged for water are subject to the approval of the department. The important difference between this and other sales of land for irrigation purposes is that the land is to be sold at the rate of one dollar per acre, that no allowance on the purchase price is to be made for the cost of the works, and that for every dollar paid on account of the purchase price two dollars shall be deposited with the department as a guarantee for the proper fulfilment by the purchaser of his obligations to construct and maintain the necessary irrigation works, and to supply water for the irrigation of the required proportion of the lands sold to him, in accordance with agreements to be entered into by him for that purpose with persons to whom he may sell any of the lands.

It is further provided in this agreement that should the grantee fail to maintain and operate the works, or should he fail to supply water for irrigation purposes in accordance with agreements entered into by him for that purpose, the minister may take over and operate the works and the said works and the guarantee fund shall be forfeited to the Crown.

In addition to these large enterprises the development of irrigated farming by individuals is shown in the following schedule :—

Smaller Irrigation Schemes.	No.	Acres to be Irrigated.
Licensed.....	160	40,503
Construction authorized.....	153	123,913
Applications.....	21	12,480
Total.....	334	176,896

While there is yet available on some of the smaller streams a portion of the ordinary low-water flow, most of the normal flow has been already appropriated and future diversions will, in most cases, be limited to high water and flood stages of the streams. This brings up an interesting question.

The unit of measurement of flowing water, as prescribed by the Irrigation Act, is the cubic foot per second, or second-foot, while the unit of quantity is the acre-foot, viz., 43,560 cubic feet, or sufficient to cover one acre to a depth of one foot. Licenses to divert water have heretofore authorized the diversion of a specified number of cubic feet per second flowing continuously throughout the irrigation season—from May 1, to September 30. This has been found satisfactory where the licenses have authorized the use of the low water, or normal, flow of the stream, which is continuous throughout the season, but where the right to divert is limited to the high water or flood period it is obvious that if sufficient water is to be obtained during such limited periods, for the irrigation of a given area, the rate of flow must be increased and a larger volume of water taken for a shorter time and stored for subsequent use.

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It seems therefore that a change might advantageously be made in the form of license and the quantity of water granted expressed in acre-feet.

As an illustration two cases may be cited: 'A' is given the right to water at all stages of the stream for the irrigation of 150 acres. According to the 'duty of water' this quantity is one second foot for 153 days, and his license is made to permit the continuous diversion of one second foot.

'B' is given the right to water from the same stream at 'high and flood stages' only, for the irrigation of the same acreage. The high water period on this stream may last for only two weeks, and it is obvious that if his license limits him to the diversion of one second foot of water during this period he will not get anything like the quantity necessary to irrigate 150 acres.

While licenses for the diversion of water for domestic, industrial and other purposes should be based upon the rate of flow (the second foot), it would be advantageous to adopt the acre-foot as the basis of all licenses for irrigation purposes. If this were done the licenses in the cases cited would permit of the diversion of 303 acre-feet during the irrigation season, or sufficient to cover each irrigable acre to a depth of two feet, and the commissioner of irrigation would be empowered to prescribe when and in what order each licensee might open his headgates and take water. In all high water and flood diversions storage reservoirs should be required and these should, wherever possible, be constructed elsewhere than in the bed of the stream, as experience has shown that reservoirs formed by damming torrential streams are usually quite expensive to maintain, owing to the necessity for constructing works of sufficient strength to withstand the annual floods.

Watersheds.

One great difficulty encountered in granting licenses to divert water from streams has been the exact determination of the relationship between a main stream and its tributaries. The volume of water in any stream is the sum of its tributaries and any diversion from a tributary will affect, to some extent, the volume available below the point of diversion on the same stream or in any into which its water flows. The practice, up to the present time, has been to treat each stream independently and to grant licenses up to the full flow of each stream, without regard to the effect of such diversions upon other streams of the same system, or watershed. This has been done in all cases, except where two or more branches of a stream bear the same name, as East, West and Middle Fork of, say, Fish creek; in such cases the several branches bearing the same name were treated as one stream and licenses were granted on any of the branches in order of priority. The system of treating the several branches as independent sources of supply has little to commend it, and the reason for the exception referred to is even more difficult to justify, as the name borne by a stream has obviously no bearing whatever upon the question.

The question is referred to by Inspecting Engineers R. J. Burley and P. M. Sauder in their reports for 1908, and is now receiving attention. The entire irrigation district has been divided into watersheds, or groups of streams, and careful measurements are being taken of the flow of each stream, with a view to determining the volume of water available for irrigation purposes in each and the effect of diversions from one upon the others of the same watershed. When fuller information has been obtained of the flow, and of the probable proportion of the diverted water that returns to the streams as seepage, it should be possible to devise some more satisfactory system of granting water licenses than that at present in force. The system of watersheds as defined on the map accompanying this report is doubtless imperfect in some respects; necessary corrections and changes can be made as soon as more accurate knowledge of stream flow becomes available.

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Reservoir Sites.

The development of southwestern Saskatchewan and southern Alberta is dependent to a very large extent upon the quantity of water available for domestic, industrial and irrigation purposes, and the present rapid settlement of these districts, with its increased demands upon the streams, has emphasized the necessity for the construction of storage reservoirs in order to conserve and apply to beneficial use the vast quantities of water that annually run to waste during the spring freshets. Most of the principal streams of this district rise on the eastern slope of the Rocky mountains, or in the foot-hills, and are of the torrential class, carrying large volumes of water for short periods during early summer and dwindling to inconsiderable proportions during the later summer and fall months.

The losses which have been sustained during the past year in southern Alberta on account of floods in the rivers, and the annual loss by the lumbermen on the North Saskatchewan, the difficulties of navigation which result from uncontrolled floods and poorly sustained flow, the requirements of towns and villages for water supply, and of railways and other corporations for water for industrial purposes, in addition to the requirements of settlers for water for irrigation and domestic purposes, make this a question of such importance that the Dominion government, which is charged with the administration of the land and the water, may fairly be held responsible for obtaining the information necessary, to determine whether or not, or to what extent, the flow of these streams may be controlled. Whether the government should or should not construct the works that may be necessary need not at present be considered. What is necessary is that reliable data should be obtained and should be available when the necessity for undertaking the work arises. It will require careful and thorough examination for several years to secure the necessary data.

Realizing the importance of this question an effort is now being made to determine whether or not suitable sites can be found at the headwaters of the Bow and Waterton rivers, and on the southern slope of the Cypress hills for the construction of reservoirs for the storage of the water that has heretofore run to waste. It is the intention to make reconnaissance surveys during the present season with a view to the location of suitable reservoir sites, to determine the catchment area tributary to each site and the probable annual run-off. The work this season will be merely of a preliminary nature, but should give results from which to determine more accurately the possibilities of controlling the streams and the nature and approximate location of the necessary reservoirs.

Drainage.

It is provided by the Irrigation Act that the property in and the right to the use of all water in any stream, &c., within the district to which the Act applies, shall be deemed to be vested in the Crown, and that no person shall divert or use water otherwise than in accordance with the provisions of the Act.

Irrigation is not required in the northern portions of the provinces of Alberta and Saskatchewan, and in some portions of both provinces drainage is required, rather than irrigation. All drainage works are under the direct control of the provincial governments, but as the water in the lakes, sloughs, marshes, &c., is the property of the Dominion government, the resultant situation has been somewhat unsatisfactory, as no provision had been made for the acquirement of a right to drain away water from any source without complying with all the provisions of the Irrigation Act and securing a license to do so.

Realizing the importance of drainage and the desirability of simplifying the procedure for permission to drain swamps and sloughs, the Irrigation Act was amended at the session of parliament for 1903 so as to provide that the Minister of the Interior may, upon the application of the proper officer of the province, approve

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of the construction of any ditch or drain authorized by the provincial authorities, upon the filing with the Commissioner of Irrigation of plans of the proposed works, and upon a report by the commissioner that the said works will not injuriously affect any existing irrigation project or the future development of irrigation. Upon receipt of such a favourable report the minister may authorize the necessary diversion of water, and no further or other license shall be necessary. The present procedure is very simple and has so far worked admirably.

Accounts.

When the Irrigation Act was first passed, in 1894, surveys were undertaken, under the direction of the Surveyor General, for the purpose of determining the extent of territory that could be irrigated from the available water supply, and efforts were at the same time made to ascertain the quantity of water available for the purpose. Contour surveys were carried on for several years and bench marks were established at convenient points as bases for future operations. Owing to a variety of causes these surveys were not continued, and for several years little or no actual survey work has been done, operations being confined almost entirely to the necessary inspections of irrigation projects either under construction or proposed.

As these earlier operations were carried on under the direction of the Surveyor General, the control of the expenditure was also left in his hands. Recently, however, all matters in connection with irrigation administration have been placed under my charge and, as I am to be held responsible for the proper carrying on of the work, the control of the expenditure has also been entrusted to me.

Some changes have been made in connection with the rendering of accounts of expenditure. Accounts are in future to be rendered monthly instead of annually and advances are not to be made, as a general rule, until the previous month's accounts have been received. Estimates are to be submitted monthly for the amount required for the succeeding month's expenditure and must be approved before the proposed expenditure can be made. The permanent officers of the commissioner's staff are to be paid monthly from Ottawa instead of directly by the commissioner as formerly. In short, the office of the Commissioner of Irrigation is to be dealt with, as far as is possible, in the same manner as are the Dominion Lands and Crown Timber agencies. These changes imply no criticism of the methods followed by the commissioner in past years, but are merely part of the policy of more effectively controlling all branches of the department which are charged with the expenditure of public funds. The same rule is to be followed in dealing with expenditure for hydrographic surveys.

Hydrographic Survey.

From the date of the enactment of the 'Northwest Irrigation Act' in 1894, up to the present time, some attention has been paid to gauging streams in the semi-arid districts, but these measurements have not been made in a systematic manner nor with sufficient frequency. The result is that we have a number of measurements of the volume of water in certain streams on certain dates, from which it is possible to estimate with an approach to accuracy the volume carried by those streams at 'low,' 'high' and 'flood' stages; but we have no accurate record of the duration of the high and flood stages and consequently little real knowledge of the total flow of the streams throughout the season or of the quantity of water that may be relied upon at any season. As requests for water for irrigation and other purposes became more frequent, this lack of knowledge of stream flow seriously interfered with irrigation administration, and it became apparent that a more accurate knowledge was absolutely essential to the proper development of the country and the supply of water for its varied necessities.

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In the latter part of 1907, Mr. P. M. Sauder, an inspecting engineer on the staff of the Commissioner of Irrigation, secured permission to visit the United States to look into the question of stream measurement as carried on there by the Geological Survey, with a view to the organization of a somewhat similar service in Canada. Mr. Sauder had had some experience in stream measurement during his service as an inspecting engineer and was convinced of the necessity for reorganizing the system upon which such work has previously been done in Canada in order to obtain satisfactory results. He visited the State of Montana, which was most convenient to the district in which he was then employed, and, through the courtesy of Mr. Follansbee and other officers of the United States Geological Survey, was furnished with much valuable information as to the manner in which the work was carried on there and was permitted to visit gauging stations and see the actual work performed in connection with stream measurements. Much of his report deals with technical matters, but some extracts which may be of general interest are submitted as an appendix to this report; they show the gradual growth of the service in the United States, the general methods used and the manner in which a similar service could be organized and maintained in Canada.

An appropriation of \$10,000 was made by parliament during the session of 1908 for the establishment of systematic stream measurements, but it was found impossible to organize such a service in time to be of much use during that year. Equipment was, however, purchased and steps taken for organizing the service during the present year. Only a portion of the vote for 1908 was used and a similar vote was taken for the current year.

The organization follows very closely the plan outlined by Mr. Sauder. The irrigation tract has been divided, for administration purposes, into three districts, viz., Calgary, Lethbridge and Maple Creek, and in each district there is one hydrographer and one assistant. Each party is equipped with a team and light wagon and the necessary gauging and surveying instruments, and is expected to establish gauging stations on all of the more important streams in the district and to arrange with residents to take daily readings of the height of water as shown on the gauge rods, and to forward weekly reports to the chief hydrographer at Calgary. Mr. P. M. Sauder has been placed in charge of the service and, in addition to organizing and supervising the work elsewhere, has personal charge of the Calgary district. Mr. H. C. Ritchie has charge of the Lethbridge district and Mr. H. R. Carscallen of the Maple Creek district. The last mentioned district is too large to be covered by one field party and, if funds permitted, it would be advisable to place an additional party, consisting of one hydrographer and one helper, in the southern part of the district. The amount voted for this work is very small when the extent of territory to be covered is taken into consideration. As the service is, as yet, organized on experimental lines, it was impossible to estimate accurately the cost of equipping and maintaining field parties, and already there is evidence that the most rigid economy must be practised in order to keep the expenditure within the limits of the appropriation.

Irrigation Map.

The Irrigation Act requires each applicant for water rights to file with the Commissioner of Irrigation, and in the Department of Interior, a plan showing the source of supply, the point at which water is to be diverted, the canals or ditches and the lands to be irrigated. These plans, while showing clearly enough the projects in connection with which they were filed, failed to show the connection between such projects and others in the same neighbourhood. As irrigation projects multiplied on some of the streams it became desirable to have a map at headquarters upon which each project could be plotted as soon as it became authorized so that the relationship between the various projects and the development in different portions of the country could readily be seen.

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Such a map was prepared and kept constantly on the draughting table for reference purposes and it has been found so useful that other features have been added during the year, such as diversions of water for domestic and industrial purposes, the more important irrigation bench marks and the watershed divisions. Topographical features have been purposely omitted, in order that the irrigation projects might be more clearly shown. A limited edition of the map has been published in the hope that it may be of use to intending irrigators. Other useful information may be added as irrigation develops. Separate watershed maps and others showing lands sold in connection with irrigation projects are kept in the office at Ottawa for reference purposes and all these are kept constantly up to date.

Respectfully submitted,

R. H. CAMPBELL,

Superintendent of Forestry and Irrigation.

(Translation.)

PRAIRIE AND FOREST FIRE LAWS FOR THIS COUNTRY.

TAKE NOTICE.

Any one who purposely or not purposely or his servant or his companion :

(1) Makes a fire and allows it to run on anybody else's land not his own, or,

(2) Allows a fire to run from his own land, or,

(3) By his doing or by his servant's doing, allows any fire to run, will have to pay \$200.

About Camping.

Any one, or any one that is with him, who lights a fire in the open for camping, and leaves it without putting it out, will have to pay \$100.

Those who must go and help put out a fire.

Those who are grown up and have not reached 60 years of age, being within 10 miles of a prairie fire or 15 miles of a bush fire, and being called upon to help put it out, refuse to help, will have to pay \$5.

(Sgd.) R. H. CAMPBELL,

The one who is the head of this work.

Department of the Interior,
Ottawa, 1908.

Any one who tears down or destroys this notice will be put in prison.

REGULATIONS FOR CAMPING SITES IN THE FOREST RESERVES.

(1) At all places suitable for public camping sites, such as lake fronts, medicinal springs, fishing grounds, or other similar locations, such area in each case as may be considered sufficient by the officer in charge of the reserve shall be reserved and set apart for the use of the general public before any individual rights are granted.

(b) The use of the public area for camping or picknicking will be allowed without special permit.

(c) Persons making use of the public area will be subject to the regulations governing the reserve, particularly those relating to the cutting of timber, the use of fire and the protection of fish and game.

(2) Leases of lots for camping sites not exceeding one acre in area and not covering more than one hundred feet of water frontage may be granted, but no lease shall be granted which will obstruct any established trails or prevent the general public from reaching springs, lake shores, fishing grounds or points of interest.

(b) The location, size and shape of such lots shall be subject to the approval of the officer in charge of the reserve.

(3) All lots shall be surveyed before occupation and the boundaries shall follow the cardinal directions wherever the topography permits. The boundaries shall be marked by blazed lines and stakes, mounds or monuments shall be erected at the angles.

(4) The annual rental for a lot shall be five dollars, payable each year on or before the first day of May, and if rental is not paid within thirty days of the date when it becomes due the lease may be cancelled.

(5) Leases shall be renewable yearly for a term of ten years but may be terminated by the Minister of the Interior at any time when it is found necessary in the interests of the forest reserve.

(b) No transfer or sub-lease shall be made without the consent of the Minister of the Interior.

(6) Leases upon a water front shall be subject to a reservation of a public shore allowance of fifty feet in width measured from high water mark. The lessee may, subject to the approval of the officer in charge of the reserve, clear and improve such public shore allowance but no buildings, fences or other structures, which will interfere with or obstruct public passage along the shore, shall be erected.

(7) Lessees will be permitted to erect buildings upon the lands leased, but no unsightly structures will be allowed, and the premises must be kept in a sanitary condition.

(8) A lease shall not convey the right to cut or remove any trees or timber without the consent of the officer in charge of the reserve.

(9) Lessees and occupants of leaseholds shall be subject to all the regulations in force in the reserve, particularly those relating to the cutting of timber, the use of fire and the protection of fish and game, and shall be required to render assistance free of charge in fighting fires.

(10) Any lessee in occupation of a leasehold shall be allowed the privilege of grazing free, on the reserve, the stock actually used by him, not to exceed five head.

(11) No application for a lease for commercial purposes or for a larger area than one acre shall be granted.

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APPENDIX No. 1.

REPORT OF THE INSPECTOR OF FOREST RESERVES.

March 3, 1909.

R. H. CAMPBELL, Esq.,
 Superintendent of Forestry and Irrigation,
 Ottawa.

SIR,—I have the honour to submit my first report upon the Dominion Forest Reserves, having been appointed to the office of Inspector of Forest Reserves, January 1, 1908.

It seems to me appropriate that the report should begin with the list of the reserves, showing their location and area and dates of formation, as no complete list has heretofore been published. The work on the forest reserves for the past year has included the operations incidental to grazing, protection against fire, reforestation, removal of squatters, marking reserve boundaries, forest surveys, map-making, examination of lands with view to the creation and extension of forest reserves, examinations of the shores of lakes to ascertain their suitability for pleasure resorts, granting of permits for the removal of timber, suppression of timber stealing, collection of statistics showing the timber on the reserves and the quantity removed therefrom, and various other duties connected with the care and management of the forest reserves.

LOCATION AND AREA.

The Dominion Forest Reserves all lie in the northwestern provinces. They are twenty-six in number, including the parks whose timber is managed in precisely the same way as that of the timber reserves proper. The number twenty-six does not include the eastern slope of the Rockies, however, although it also is under management similar to that of the forest reserves. Manitoba has six reserves, namely :—

	Square miles.
Riding Mountain reserve, containing.....	1,535
Duck Mountain reserve, containing.. . . .	1,251
Porcupine No. 1 reserve, containing.. . . .	322
Lake Manitoba West reserve, containing.. . . .	248
Spruce Woods reserve, containing.. . . .	110
Turtle Mountain reserve, containing.. . . .	109½
Total.. . . .	3,575½

Saskatchewan has four, namely :—

	* Square miles.
Porcupine No. 2 reserve, containing.. . . .	360
Moose Mountain reserve, containing.. . . .	163
The Pines reserve, containing.. . . .	145
Beaver Hills reserve, containing.. . . .	72
Total.. . . .	740

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Alberta has six, namely :—

	Square miles.
Jasper Park reserve, containing.	5,000
Rocky Mountains Park reserve, containing.	4,500
Cooking Lake reserve, containing.	114
Kootenay Lakes, containing.	54
Cypress Hills, containing.	18
Elk Island, containing.	16
Total.	9,702

British Columbia has ten, namely:—

	Square miles.
Yoho Park reserve, containing.	828½
Glacier Park reserve, containing.	576
Hat Creek reserve, containing.	208
Long Lake reserve, containing.	190
Tranquille reserve, containing.	149
Niskonlith reserve, containing.	124½
Monte Hills reserve, containing.	106
Donald reserve, containing.	72
Larch Hills reserve, containing.	25
Martin Mountain reserve, containing.	18
Total.	2,297

Summarizing:—

	Sq. miles.	Acres.
Manitoba has.	3,575½	2,288,160
Saskatchewan.	740	473,600
Alberta.	9,707	6,209,280
British Columbia.	2,297	1,470,080
Grand Total.	16,314½	10,441,120

DATES OF FORMATION.

The Dominion government awoke to the necessity of forming forest reserves in 1887, and has been constantly moving forward in that direction, thus conserving the timber, ever since that date, as appears from the following table which gives the dates when the reserves were set aside.

- 1887, June 23.—Rocky Mountains Park reserve, by Act of parliament.
- 1888, October 11.—Glacier Park reserve, by Order in Council.
- 1894, December 29.—Moose Mountain reserve, by departmental order.
- 1895, May 30.—The Kootenay Lakes reserve, by Order in Council.
- 1895, July 13.—Riding Mountain reserve, by departmental order.
- 1895, July 13.—Lake Manitoba West reserve, by departmental order.
- 1895, July 13.—Spruce Woods reserve, by departmental order.
- 1895, July 13.—Turtle Mountain reserve, by departmental order.
- 1899, June 5.—Cooking Lake reserve, by departmental order.
- 1901, December 14.—Yoho Park reserve, by Order in Council.
- 1901, August 29.—Beaver Hills reserve, by departmental order.
- 1902, November 3.—Long Lake reserve, by departmental order.
- 1902, November 3.—Rocky Mountain reserve, extended 152 townships by Act of parliament.

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1903, November 26—Glacier Park reserve, extended 16 townships by Order in Council.

1905, November 14.—The Pines reserve, by departmental order.

1906, July 13.—Duck Mt. reserve, by Act of parliament.

1906, July 13.—Duck Mountain reserve, by Act of parliament.

1906, July 13.—Porcupine No. 2 reserve, by Act of parliament.

1906, July 13.—Cypress Hills reserve, by Act of parliament.

1906, July 13.—Monte Hills reserve, by Act of parliament.

1906, July 13.—Martin Mountain reserve, by Act of parliament.

1906, July 13.—Niskonlith reserve, by Act of parliament.

1906, July 13.—Tranquille reserve, by Act of parliament.

1906, July 13.—Hat Creek reserve, by Act of parliament.

1906, July 13.—Donald reserve, by Act of parliament.

1906, July 13.—Larch Hills reserve, by Act of parliament.

1906, July 13.—Elk Island reserve, by Order in Council.

1907, September 14.—Jasper Park reserve, by Order in Council.

1907, September 17.—Yoko Park, reduced 105 square miles, by Order in Council.

The work of making forest reserves is still progressing, and will need to progress in Canada for many years. This year the region around the Waterton lakes in south-western Alberta was examined for this purpose. The forester who examined it recommended that 195 square miles be set aside. Also, territories adjacent to certain reserves have been examined with a view to ascertaining their suitability to be added. Recommendations have been made that 130 square miles be added to the Spruce Woods reserve in Manitoba, 238½ square miles to the Pines reserve in Saskatchewan, 45 square miles to the Beaver Hills reserve in Saskatchewan and 192 square miles to the Cypress Hills reserve in Alberta. Chiefly land unsuitable for agriculture or grazing has been recommended to be put into forest reserves.

GRAZING ON FOREST RESERVES.

It does not seem to me that the department, however, should exclude from the reserves all land suitable for grazing. In fact, they already include large grazing areas, and, if the recommendations made this year be sustained, such areas will be added to the Cypress Hills and Beaver Hills. These areas are among timber, and so we include them, rather than to exclude the timber. Nor should the department prevent grazing on these areas. For several reasons it is desirable that they should be grazed. The forest reserves are for the use of the people; then why should good grass be allowed to go to waste if it can be utilized? The grazing may be desirable also as a protection to the woods. In some places the ground is covered with a dense growth of long grass and peavine. This, when dry, offers much fuel for fire; and when the fire once gets into it, it is almost impossible to check the flames. Cattle on the prairie have much the same habit as the buffalo. In going to water they follow one another and make paths which they follow day after day. These paths are fire lines where the fire may be checked, small to be sure, but there are many of them, and they give lines from which to back-fire.

Perhaps it will be objected that grazing prohibits the reproduction of timber. It seems to me, however, that the interference with reproduction from this cause is much overestimated. I know in the west many fields grazed constantly that have come into timber. There is danger from overgrazing, but from judicious grazing there is much less danger than from long grass and peavine.

PROTECTION AGAINST FIRE.

The problem of protecting the forest reserves against fire is the most difficult one we have. The fire problem is difficult even in the eastern provinces; but the

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conditions for fighting fire here are very favourable as compared with those prevailing in Manitoba, Saskatchewan, Alberta and eastern British Columbia. Compare, for instance, the number of rainy days for the summer months at Calgary, Alberta; Qu'Appelle, Saskatchewan; Winnipeg, Manitoba; and Toronto, Ontario. In our comparison, however, we must not only consider the number of rainy days but also the quantity of rain falling on those days; because, although a day may be considered rainy, there may not be precipitation enough to count much towards putting out a forest fire. The following table is a comparison for the four places mentioned, showing the average number of rainy days in each of the summer months and the average quantity of rain falling in those months. It is compiled from statistics furnished by the Meteorological Service published in a volume entitled 'Rain and Snowfall of Canada.'

TABLE OF RAINY DAYS.

(Average 1883 to 1902—20 Years.)

—	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Calgary, Alta.	0·20	0·06	0·33	2·93	9·40	12·93	12·00	8·66	6·93	2·79	2·66	0·26	59·15
Qu'Appelle, Sas.	0·25	0·30	0·40	4·00	8·80	12·65	11·90	8·35	8·15	4·70	0·90	0·30	60·70
Winnipeg, Man.	0·45	0·25	1·20	6·80	9·15	13·40	12·25	12·25	11·05	8·45	1·60	0·07	76·92
Toronto, Ont.	5·30	5·75	6·70	9·30	13·30	11·35	11·95	10·35	11·05	13·20	11·15	7·45	116·85

TABLE OF RAINFALL IN INCHES.

(Average 1883 to 1907—25 Years.)

—	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Calgary, Alta.	0·013	0·016	0·024	0·262	2·016	3·060	2·630	2·490	0·991	0·191	0·004	0·005	11·696
Qu'Appelle, Sas.	0·002	0·085	0·036	0·356	1·785	3·580	2·594	1·750	1·446	0·463	0·400	0·072	13·336
Winnipeg, Man.	0·005	0·003	0·160	1·142	1·858	3·319	3·003	2·209	1·253	1·290	0·728	0·013	14·983
Toronto, Ont.	1·128	0·954	1·360	1·467	2·754	2·844	2·856	2·624	2·855	2·532	2·104	1·563	25·041

It would appear from these tables that Toronto is at a slight disadvantage in the month of June. But of all the summer months, June, July and August offer the least danger to the forest. In these months the grass is green, the leaves are out on the shrubs and trees, the sap is in the bark, and the ground is moist from the shade of the trees. The chief danger periods are in the spring before June, and in the fall after September, when the woods are dry.

The eastern provinces have a great advantage also in regard to the wind. The average hourly velocity of the wind at Winnipeg for the eight summer months of 1905, as stated by the Meteorological Service, was 14·87 miles per hour, while at Toronto it was only 7·36 miles per hour; just twice as great at Winnipeg as at Toronto. The people of the east were fortunate in that respect last summer. Had the wind here been as high as in the west, quite likely there would have been twice the quantity of timber destroyed. Then, in the east the winds are moist; there is no dry chinook.

Again, in respect to population the east has the advantage. When a forest fire starts in Ontario or Quebec, you can just go out to the 100-acre farms, and to the numerous small villages and soon have a force of men to put it under control. But

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in the Northwest the population is scarce, railroads are not so numerous, and telephonic communication is not so good. In that country we cannot count much on putting out forest fires and so we have to be all the more diligent to see that fires do not get started.

The reserves are under constant patrol, summer and winter. During the danger periods the rangers lay aside all other duties and guard the forest against fire. In 1908, we had only two fires of any consequence, one in the Pines reserves which burned over 22 square miles, destroyed no merchantable timber, and one in the Turtle mountains, extending over 28 square miles, mostly covered with grass. In each of these fires, however, large areas of young reproduction growth were destroyed.

Last year we began a practice which we know saved the reserves several fires. It is a well known fact that, in the early spring, the fields become bare and the grass dry before the snow is all gone from the woods. While such conditions existed the forest rangers burned the meadows along the reserve boundaries. Fires, coming in from the prairie, met this wide fire line and died out for want of fuel. Around the Riding mountains the meadows were burned for ninety miles, around the Duck mountains for forty-two miles, and around the Porcupine mountains for thirty miles; all these in the most dangerous places. It is advisable to extend this practice to all the reserves wherever it is practicable, and to carry it out upon an extensive scale.

Ploughed fire guards also should be made around and across some of the reserves. The forest ranger on the Cypress Hills has instructions to plough a guard of four furrows entirely around the reserve, and outside of this four rods distant from it a second guard. Then, on calm days, with the help of two or three men he is to burn the grass between the two guards. On the Spruce Woods reserve several guards should be ploughed, one of which should run along each side of the Canadian Northern Railway which crosses the reserves.

Roads along the boundaries and through the reserves are being constructed to aid in fighting fire. One hundred and fifty miles was made this year. In certain places these roads are very much needed. For instance, I noticed in my inspection of the Turtle Mountain reserve that the roads all run north and south. There is no way of going promptly and conveniently east and west. The fires mostly come in from Dakota which lies to the south. Therefore, to facilitate the fighting of fire the forest ranger was instructed to make a road following the southern boundary. This will not only make it easier to move about on the reserve but it will serve as a fire line from which back-firing may be done.

REFORESTING.

The department is making an attempt to reforest some of the areas denuded by fire. From some experiments made last spring, it would appear that this might be accomplished by putting down a few seeds with a handful of sand over them at each place where we wish to have a forest tree. This was tried on the Turtle mountains and on the Spruce Woods reserve. In the former it was successful, in the latter unsuccessful. On the Turtle mountains the seed was thus placed under poplars and among long grass. The following species were planted: White Pine, Norway Pine, Jackpine, Bull Pine, White Spruce, Red Spruce, Colorado Blue Spruce, Engelmann Spruce and Balsam. Among the poplars the seed was evidently taken by birds, rodents or insects; but in the long grass every species germinated, and just before snow-fall the trees were alive and looking well.

It is advisable to carry on a variety of such experiments next summer. For this purpose the forest ranger on the Spruce Woods reserve collected last fall 40 bushels of Spruce cones, the ranger on the Cypress Hills 40 bushels of Lodgepole Pine, and a party of foresters working on the Pines reserve 50 bushels of Jackpine. These are the species with which we hope to achieve success as they are the ones likely to prove hardy.

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We shall do our best to win along this line, because the method of raising trees in nurseries until they are three or four years old and then setting them out into the field is far too slow and too expensive a method to count much towards meeting the demand for wood that will develop on this continent during the next hundred years. The nursery method is simply gardening. It is a good method for the farmer's wood-lot. Foresters should, however, seek for a method commensurate with the needs of the government lands. In the meantime, however, we are not despising the gardening method even on the reserves. We may be forced to use it, and next spring we shall start some seed beds. In fact 35,000 trees have already been planted on the Spruce Woods reserve, from stock raised at the forestry farm at Indian Head.

REMOVAL OF SQUATTERS.

A large number of people, mostly foreigners, had located and started farming operations upon the reserves, expecting some time in some way, political or otherwise, they would be permitted to make entry for the places they occupied. The department determined upon their removal. They numbered one hundred and twenty-six on the Riding mountain, and twenty-five on the Turtle Mountain reserve. The task of removing these people was a delicate one and required great judgment and courage on the part of the forest rangers. The chief ranger of the Riding mountains, W. A. Davis, devoted the entire summer to the work. All the squatters have been removed except three on the Riding mountains and two on the Turtle mountains. These remaining ones will move early next spring.

In this work the department followed a lenient policy. The squatters were taken to look over lands in wagons furnished to them free of charge. They got free entry for the lands they selected, and they received compensation for improvements they had on the forest reserves. The total cost of removing all these people was only \$6,000. They have all made affidavits stating that they have been well treated and are pleased with the change.

MARKING RESERVE BOUNDARIES.

In order that the public may not unintentionally trespass upon the forest reserves thinking themselves on private property, or on other Dominion lands, the department began last year to mark the boundaries with iron posts. These are three-cornered and hence differ in shape from the regular Dominion survey posts. They are marked with the letters 'D. F. R.' (Dominion Forest Reserve), and the part that projects out of the ground is painted red so that it will be readily observable, summer and winter.

Considerable work was done in this direction last year. Mr. David Beatty, a Dominion land surveyor, was at work with a party of men on the unsurveyed portion of the boundary of the Porcupine reserve and ran fifty-one miles of the line. The forest rangers are working on the boundaries that have been surveyed and have located 140 miles.

This work was in many places difficult of accomplishment. It was about thirty years since the lines had been surveyed and some of them having been burned over, the wooden posts had been destroyed and the mounds almost obliterated. People familiar with the west know, also, that mosquitoes and flies are numerous and troublesome in the summer months. As it is the intention to have the boundary line a road from which fire can be fought it was cut out from six to eight feet wide.

Much more of this work would have been done if the rangers could have begun early in the spring, but during the early part of the summer they were all busy with the removal of squatters.

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FOREST SURVEY.

In order that the department may have a thorough knowledge of the reserves and be able to form a judgment as to how the tree growth thereon should be managed, a timber and topographic survey is being conducted. Last summer Assistant Inspector MacMillan with a party of five forestry students conducted such survey of the Pines reserve. Assistant Inspector Dickson did similar work with a party of thirteen in the Riding mountains. This survey serves a double good purpose. It gives the department the knowledge it desires and gives the students the practical side of their forestry course.

The timber survey makes a thorough study of the tree growth. It gives the areas covered with mature timber and with younger timber and states the quantity of each. It considers the accretion and reproduction of timber in the forest and discovers means for their encouragement in quantity and quality. It examines areas having no tree growth, and recommends methods by which they may be afforested. It studies the effect of past management upon the forest, and advises improvements for the future. It suggests means by which dangers to the forest from fire, storms, fungi and insects may be reduced. It investigates the utilization of the forest, and seeks new uses for forest products.

The topographic survey describes the hills and valleys, the lakes, streams and trails. It studies the best routes for the removal of the mature timber and locates trails for protecting the forest against fire.

KINDS OF TIMBER.

The following species of trees exist in commercial quantity on the forest reserves:

Poplar (*Populus tremuloides* Michx.) and Balm of Gilead (*Populus balsamifera* Linn.) exist on all reserves east of the Rockies. Poplar reaches a maximum size of 32 inches at breast height. Fifteen inches, however, is the largest common size for sound trees. Balm of Gilead reaches a maximum of 34 inches, with a common large size, sound, of 18 inches.

White spruce (*Picea canadensis* [Mill.] B.S.P.) and black spruce (*Picea mariana* [Mill.] B.S.P.) exist on all reserves east of the Rockies, except Turtle mountain, Moose mountain, Beaver hills, Cooking lake, Elk island and Buffalo Park reserves. Maximum 48 inches; common large, sound, 18 inches.

Engelmann spruce (*Picea engelmanni* Engelm.) exists on the Kootenay lakes, Jasper Park, Rocky Mountains Park and all British Columbia reserves. Maximum, 30 inches; common large, sound, 16 inches.

Jackpine (*Pinus banksiana* Lamb.) exists on all Manitoba reserves, except the Spruce Woods and Turtle mountain. In Saskatchewan it appears in the Porcupine and the Pines reserves. Maximum, 20 inches; common large, sound, 12 inches.

Lodgepole pine (*Pinus contorta*, var. *Murrayana* [Engelm.] B. and W.) exists on the Cypress hills, Kootenay lakes, Jasper Park, Rocky Mountains Park and all British Columbia reserves. Maximum, 20 inches; common large, sound, 14 inches.

Bull pine (*Pinus ponderosa* Laws.) exists on all British Columbia reserves. Maximum, 36 inches; common large, sound, 26 inches.

Western white pine (*Pinus monticola* Dougl.) exists on all British Columbia reserves. Maximum, 32 inches; common large, sound, 24 inches.

Tamarack (*Larix americana* Michx.) exists on all the Manitoba reserves, except Turtle mountain. It occurs on the Pines and Porcupine reserves in Saskatchewan, and on the Jasper Park in Alberta. Maximum, 24 inches; common large, sound, 14 inches.

Western larch (*Larix occidentalis* Nutt.) exists on all the British Columbia reserves. Maximum, 30 inches; common large, sound, 24 inches.

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Douglas fir (*Pseudotsuga mucronata* Sudw.) exists on the Kootenay lakes, Jasper Park, Rocky Mountains Park and all British Columbia reserves. Maximum, 36 inches; common large, sound, 24 inches.

Balsam (*Abies balsamea* [Linn.] Mill.) exists on Riding mountain, Duck mountain, Porcupine and Lake Manitoba West reserves. Maximum, 17 inches; common large, sound, 10 inches.

Western cedar (*Thuja plicata* Don.) exists on all British Columbia reserves. Maximum, 84 inches; common large, sound, 40 inches.

Western hemlock (*Tsuga mertensiana*, authors) exists on the British Columbia reserves. Maximum, 35 inches; common large, sound, 10 inches.

White birch (*Betula papyrifera* Marsh.) exists on the Manitoba reserves. Maximum, 26 inches; common large, sound, 14 inches.

There are also on the Manitoba reserves small quantities of merchantable green ash (*Fraxinus lanceolata* Borkh.). Maximum, 12 inches; common large, sound, 8 inches. Bur oak (*Quercus macrocarpa* Michx.) Maximum, 27 inches; common large, sound, 10 inches. Manitoba maple (*Acer negundo* Linn.). Maximum, 11 inches; common large, sound, 7 inches.

TIMBER ESTIMATES.

As has been previously stated, the department is making a forest survey of the reserves which should give a close estimate of the timber thereon. Such estimate has been made for the Riding mountain, Turtle mountain, Moose mountain and the Pines reserves, and the following figures are probably close to the actual quantities on these reserves. For all other reserves the estimates are only tentative:—

Manitoba Reserves.

	Saw Timber. Bd. ft.	Fuel Wood. Cords.
Duck Mountain..	300,000,000	3,000,000
Riding Mountain..	250,000,000	2,500,000
Porcupine No. 1..	50,000,000	750,000
Turtle Mountain..	1,333,000	135,000
Spruce Woods..	1,000,000	30,000
Lake Manitoba West..	600,000	40,000
Total..	602,933,000	6,250,000

Saskatchewan Reserves.

	Saw Timber. Bd. ft.	Fuel Wood. Cords.
Porcupine No. 2..	50,000,000	500,000
Moose Mountain..	5,000,000	130,000
The Pines..		50,000
Beaver Hills..		10,000
Total..	55,000,000	690,000

Alberta Reserves.

	Saw Timber. Bd. ft.	Fuel Wood. Cords.
Eastern Slope..	3,000,000,000	50,000,000
Rocky Mountains Park..	300,000,000	3,000,000
Jasper Park..	100,000,000	1,000,000
Cypress Hills..	2,000,000	100,000
Cooking Lake..		10,000
Elk Island Park..		10,000
Total..	3,402,000,000	54,220,000

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British Columbia Reserves.

	Saw Timber. Bd. ft.	Fuel Wood. Cords.
Railway Belt and Yoho Park.	600,000,000	6,000,000

Summary.

	Saw Timber. Bd. ft.	Fuel Wood. Cords.
Manitoba Reserves.	602,933,000	6,250,000
Saskatchewan Reserves.	55,000,000	690,000
Alberta Reserves.	3,402,000,000	54,220,000
British Columbia Reserves.	600,000,000	6,000,000
Total.	4,659,933,000	67,160,000

ESTIMATE OF ANNUAL OUTPUT.

The following table showing the quantities and kinds of timber taken from the reserves is also tentative as it is only an estimate. Heretofore, the quantities of timber cut on permits granted for the reserves have not been kept separate in the records from those granted for timber on other Dominion lands. It is the intention that in future forest reserve matters shall be kept by themselves so that accurate data in regard to them can be obtained. The receipts, however, as stated in the table, may be considered as correct. The figures may seem small considering the quantities of timber removed; but it should be borne in mind that every homesteader is entitled to one free permit.

TIMBER CUT DURING YEAR ENDING MARCH 31, 1908.

District.	Lumber. Ft. B.M.	Logs. Lineal ft.	Cordwood. Cords.	Fence Posts. No.	Fence Rails. No.	Poles. No.	Receipts.
							\$
Manitoba Reserves.	3,789,180	17,134	3,647	31,100	22,650	8,250	7,044 41
Saskatchewan Reserves.	343,435	464,110	9,029	117,140	106,510	102,414	535 35
Alberta Reserves	1,400	332,612	1,280	52,080	247,155	48,265	56 75
British Columbia Reserves.	8,338,000		2,500				4,794 00
Eastern slope, north as far as Brazeau River.	31,651,610		56,037	336,860	1,336,700		19,325 00
Totals	44,123,625	813,856	72,493	737,180	1,713,015	158,929	31,755 51

Throwing these different kinds of material into saw timber and cordwood we have saw timber about 45,751,325 board feet; cordwood, 105,943 cords. Dividing these quantities into the quantities estimated as standing on the reserves we perceive that the saw timber should last for one hundred years, and the cordwood for six hundred and thirty-four years, practically for ever, providing that the rate of consumption remains the same and that no timber be destroyed by fires or other causes. To be sure the growth has not been taken into account, but it is reasonable to suppose that fires will at least offset the growth, be we ever so vigilant.

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Up to the present time permits have been granted only to actual settlers living within fifty miles of the nearest boundary of any reserve. This limitation is worthy of consideration. There is very little wood in southern Manitoba and scarcely any in Saskatchewan, and it is a question if the people all over these provinces should not be allowed the use of the mature wood of the forest reserve. It may not be quite justice to allow only the people living in the immediate vicinity of the reserves to have all the blessings.

It is a question also, if it is wise to allow only settlers to cut the timber. The average settler in taking out timber has little care for the future of the forest. His only object is to get out the timber he needs as easily as possible. If one tree has all the timber he requires, but if two will furnish it more easily, he will cut the two trees. Moreover, the settlers cut high stumps, leave large tops, and make no disposal of the brush. Millmen, knowing the loss in cutting high stumps and leaving large tops, and having regard for the future growth, treat the forest with much greater care. It therefore seems to me that mills should be permitted to enter the reserves, but they should enter under certain restrictions:—

- (1) Only portable mills should be permitted.
- (2) Mills should locate where the Forestry Branch directs.
- (3) Permits should be granted for a definite tract not more than one mile square.
- (4) Permits should be granted for one year only, but should be renewable at the discretion of the Superintendent of Forestry and should be cancellable at any time for violation of the regulations.
- (5) Only such timber should be cut as is marked previously by the department for removal, and no cutting should begin before the marking is completed.
- (6) In cutting down the trees the stumps left should not be more than 18 inches high.
- (7) The trees should be cut down with a saw.
- (8) All parts exceeding 4 inches in diameter of trees cut down should be removed by the permittee, and this should be done as the cutting progresses.
- (9) Brush should be cut so as to lie flat on the ground excepting along the roads where it should be piled and burned under the immediate supervision of the department.
- (10) Any unmarked trees cut down on account of the lodging of the larger trees in falling should be piled by themselves separately from the other logs, and should be considered the property of the department to be afterwards disposed of, either to the permittee or others as considered best.
- (11) The dues on timber removed should be the same as those demanded of settlers.
- (12) Lumber should be sold only to bona fide occupants of homesteads, or for the purpose of erecting churches and schools in rural districts.
- (13) Any lumber obtained from a permittee and afterwards sold or offered for sale should be seized by the department.
- (14) No settler should be permitted to receive from the mill in any one year more than 10,000 feet of lumber.
- (15) The price of lumber at the mill should be fixed periodically by the department.
- (16) Settlers should be permitted to draw out their lumber with their own teams.
- (17) Permittees should be required to keep a mill book in which should be recorded all sales, to whom made, quantity sold, and price charged.

The department has this scheme of treating the forest already under operation. A saw-mill operating in the Cypress hills was last fall put under such restrictions, partly as an experiment, and I am glad to be able to report that the experiment is apparently a success. The owner of this mill had applied for a tract of spruce timber

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three-fourths of a mile square. The department stated the restrictions. They were accepted. Assistant Inspector Dickson marked the trees to be cut, and the work of cutting began. The forest ranger of the Cypress Hills reserve, who has the work under his supervision, writing on January 22, 1909, reports as follows :—‘I have been down to the Grayburn mill for a few days and was all through the bush where they are cutting. They are keeping very close to the marked trees. I told them to get the brush piled along the trails and to get the poles out and they promised to do so. I will go down again soon and burn it.’

THE RESERVES AS PLEASURE RESORTS.

There are many beautiful lakes on the forest reserves and some of these are being now freely used as summer resorts. It seems to me that this should be encouraged. The campers are not a menace to the forest, in fact they are a protection, as they have personal interest in guarding the forest against fire. Besides, with campers on the lakes when a fire occurs there are people at hand to help to extinguish it. Therefore, the advisability of renting camp sites on the shores of these lakes, the leases to be made out for ten years, renewable at the discretion of the superintendent of forestry, and cancellable at any time for any misuse or menace to the forest reserve, is under consideration.

Respectfully submitted,

A. KNECHTEL,

Inspector of Forest Reserves.

APPENDIX No. 2.

REPORT OF R. H. McMILLAN.

OTTAWA, March 31, 1909.

R. H. CAMPBELL, Esq.,
Superintendent of Forestry,
Ottawa.

SIR,—I have the honour to submit herewith my report of the work which I have carried on under your instructions since June 15, 1908.

I first undertook an examination of the Pines Forest reserve, an area of 145 square miles, a short distance southwest of the town of Prince Albert, Saskatchewan. The object of the examination was to discover to what extent the reserve had suffered from fire, how much timber there was remaining, how much young growth capable of producing timber, the character of the soil around the reserve and what steps should be taken to protect the reserve from fire and put it in the best shape for the production of timber to supply the needs of the farmers on the surrounding prairie.

Four men were employed, two of them forest students, and a detailed examination and survey were made of the whole reserve. A map has since been prepared showing the location of the mature timber, the young trees and prairie and of all the trails. Where timber representative of the region could be found, measurements were taken to learn the average growth rate of jackpine in northern Saskatchewan and to discover its suitability for the production of railroad ties. A brief summary of conditions governing on the Pines Forest reserve is given below.

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The Pines Forest reserve consists of an area of 145 square miles of sand ridges separated by muskegs. Where the land is sandy it is too light for agriculture. The sand is shown in railway cuts and at river banks to be in some instances 30 feet deep. If such land were cultivated it could not produce a crop, and when the sod and forest cover were removed it would be exposed to the forces of the wind and drifting sand dunes would be formed. Such land is now being artificially reforested at considerable expense by the Ontario government. There are small areas where the soil is a light sandy loam, but in such situations the drainage is so poor that a large proportion of the land is covered with muskegs and broken by sloughs. It is thus unfit for cultivation.

There is no doubt but that of the whole of the land within the reserve there is no quarter section but what is too uniformly broken by sand hills, ridges, sloughs, or muskegs to be suited for agriculture or capable of producing a living for a family, nor is the reserve sufficiently adapted for grazing to be thrown open for homesteads with that intention. Where sod exists it is very light and a large area would be required for the support of very few cattle. There are no natural hay meadows in the reserve, and the feed necessary to support stall-fed cattle through the winter would have to be grown on good land outside the reserve.

Around the immediate edge of the reserve there are settlers, most of them with very poor farms, who have depended largely upon the sale of cordwood from the reserve as a means of making a living. These people, together with a few cordwood dealers, who have profited by shipping wood to points south of the prairie, are the only ones at present interested in the sale of timber from the reserve. The majority of the people, those who are settled on the good agricultural land to the east and south of the reserve, are very much interested in having the cutting of wood limited to bona fide settlers. These farmers are at present dependent upon the Pines for building material, fencing and fuel, and they all believe that for the sake of the future, when increasing settlement will make timber still more valuable, the Pines Forest reserve should be protected from fire and managed so that it will perpetually produce timber for the use of the settlers.

Another class of people interested in the Pines Forest reserve as a source of timber supply are the residents in the prairie towns and communities farther to the south. The reserve is crossed by the railway and cordwood has been profitably shipped to Moosejaw and Regina and other towns on the prairie. Local demands must be considered first, and therefore it may not be possible from the small supply of timber now existing on the reserve, to permit the shipment of cordwood to distant points, but there is no doubt that in the future, when the whole area is under timber, there will be a surplus which can be made available for southern Saskatchewan.

Thirty years ago the greater part of the reserve was covered with dense stands of jackpine, spruce, tamarack and poplar. Altogether there were 38,400 acres of jackpine forest. Stumps and scattered trees still standing show that the average diameter over large areas was 8 to 12 inches, and that the maximum diameter was 24 inches. The contractors twenty years ago cut over a large area, taking only one tie from a tree. In the slash which they left fires were started from settlements and the railroads, and as a result there is not an acre left but has been burned over. The small patches of timber which were not completely destroyed by the fire have been gradually removed by the contractors, cordwood shippers and the settlers. No timber now remains, excepting scattered patches of green and dead trees fit only for fuel. A detailed survey of the reserve showed that there were altogether only about 45,000 cords of fuel and of this nearly 15,000 had been killed by fire. There are about 37,000 cords cut per year from the reserve. This demand will in four years exhaust the supply of dead wood and will in ten years, with no extra consumption for building

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logs, and fencing, strip the reserve. It would therefore seem advisable that the remaining wood be kept for the supply of the surrounding people.

Fortunately the fire which has destroyed the mature timber has brought about conditions favourable for the growth of young timber. Jackpine, which is the tree best adapted to the light sandy soil of the Pines reserve, is a tree which is also well fitted for reclaiming burned over areas. The young pines begin to bear seed when about ten years old. The seed is encased in hard cones which hang on the tree for a number of years. The fire which destroys the timber does not always destroy the cones but only serves to open them up and liberate the seed. Jackpine seed germinates best on mineral soil where there is no shade or vegetation. These conditions are found after a forest fire and as a result a fire on jackpine land is nearly always followed by a very dense reproduction of young jackpine trees. There are now about 22,400 acres of the reserve densely covered with a thrifty growth of jackpine, varying in age from five to twenty years. Growth measurements taken of jackpine showed that at sixty years it reaches a height of 58 feet, a diameter of 11 inches at the stump and will make three ties or 32 feet of logs per tree. The young jackpine at present on the reserve will, if protected from fire, produce small fuel in ten years, and in twenty years from now will be large enough for poles and small logs.

There are on the reserve 40,000 acres of denuded land upon a portion of which there never was a forest, excepting small poplar and willow, and from the remainder of which repeated fires have removed both the original timber and any young reproduction that may have occurred. The denuded land is nearly all well suited to the growth of jackpine. A portion of it is gradually coming up with jackpine and poplar, and there is no doubt but that eventually it will all be reforested. It is probable, however, that it will be 75 or even 100 years before the whole of the denuded land is again covered with timber. It may therefore be advisable for the government to take some steps to encourage the artificial reproduction of timber on the tracts where natural reproduction seems least possible. The scheme which has been tried elsewhere with success is the sowing of seed on the snow in the winter. It seems that if jackpine seed were coated with red lead to protect it from birds and animals it could be sown broadcast upon the snow in winter and would with the melting of the snow be taken down to the soil under conditions most favourable for its germination. This method of artificial reproduction is very cheap.

The first necessity for the management of the reserve is efficient fire protection. The fire ranger should live on the reserve and should be a man who can easily secure the co-operation of the settlers in preventing and extinguishing fires.

The reserve boundaries do not at present follow the outlines of the sandy tract which the Pines Forest reserve represents. There are around the edge of the reserve several sections and quarter sections quite as unfit for agriculture as any of the lands within the reserve, some of them being very sandy, others for the greater part, covered with sloughs. This land can never be of any value to the country except by producing timber. An examination was made of all the land surrounding the reserve and such sections as are unfit for agriculture and are available were specially examined and reported upon, in order that they might be, if possible, added to the reserve, and the boundaries definitely defined.

So far as could be observed the cattle and horses which have been grazing on the reserve have done no damage, but have probably been of assistance in keeping down the grass and thus lessening the fire danger and giving seedlings a better chance to start. The grazing is of some value to the surrounding farmers, particularly those near the reserve, who have very poor land, and it would therefore seem advisable that they be allowed to secure, as cheaply as possible, grazing permits for their stock.

There has been game in the reserve, and at present moose, elk and deer are occasionally seen. There is absolutely no enforcement of the game law and as a

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result what little game remains will be very soon exterminated. This territory is very accessible and is a most convenient hunting ground for all the towns between Prince Albert and Regina. If the game were protected it would do much to popularize the reserve with those interested in sport.

PRINCE ALBERT FOREST RESERVE.

Acting under your instructions I made an examination of the sandy tract north of the Saskatchewan river, a portion of which had previously been set aside as the Prince Albert Forest reserve, which originally covered only about 19 square miles, although the sandy ridge upon which it is situated extended both to the east and the west and covered about 200 square miles.

The object of the examination was to locate the land which even in consideration of its proximity to Prince Albert, its possible value for market gardening and poultry farming, would nevertheless be most profitably employed in the production of timber.

Provisional boundaries were established for an area of 214 square miles of sandy land unfit for agriculture, which it seems might be most profitably set aside as a forest reserve, with the possible exceptions of a few isolated quarter sections or sections upon which local soil conditions are such that a crop can be produced. Aside from such exceptions the whole area of 214 square miles is exactly similar in topography and soil conditions to the Pines Forest reserve already described. It is if anything more uniformly sandy. Forest fires have repeatedly run over the whole tract and very little mature timber for anything but cordwood now remains. The burnt over area is everywhere covered with a dense jackpine reproduction which will in 20 to 30 years be producing valuable fuel and small timber.

If the land is now thrown open for homestead some of it will be homesteaded by people who do not know that the soil is unfit for agriculture; some of it will be homesteaded by others who are anxious to get what scattered fuel there is and who will abandon the land. The result will be that no permanent profit will come from the use of the land. The young timber will be cut and destroyed by fire and there will eventually be, between the town of Prince Albert and the fertile land a few miles north, a worthless sandy waste across which it will be expensive to maintain roads and from which no profit can be derived. It has been proved in other countries and is now being demonstrated in Ontario, that no good can come from the settlement of sandy land, and that if such land is settled it almost inevitably reverts to the government after having been productive of two or three generations of hardship for its unfortunate owners. It is surely wiser and cheaper to keep such lands under forest cover than to be forced later to adopt expensive means of reforestation.

This area of approximately 200 square miles under forest management producing a perpetual crop of fuel, ties and timber could not fail to be a source of revenue as well as pleasure to the citizens of Prince Albert. Where coal is scarce, as it is in this region, a guarantee of a perpetual supply of cheap fuel might be a consideration which would induce small manufacturers to locate in the region.

The Canadian Northern Railway will this year start the construction of their Battleford line, a part of which traverses the timber area north of Prince Albert. It is very important that extra precautions be taken to prevent fires starting from the right of way.

MOOSE MOUNTAIN FOREST RESERVE.

Acting under your instructions I visited the Moose Mountain Forest reserve to look into the question of making provision for permanent camping sites on the different lakes and to see what could be done to improve a few of the trails.

The Moose Mountain Forest reserve furnishes the only summer resort easy of access for people residing between Winnipeg and Moosejaw. Railway lines and trails

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which have lately been constructed have made trips to Moose mountain much more convenient. The camping season lasts from July 1 to September 1. During this time in the summer of 1908, 2,500 people are estimated to have visited the reserve for periods varying from one day to four weeks. By far the greater number go to Fish lake, which is the largest and most beautiful summer resort. Other lakes visited are Rocky lake, Gillis and Stevenson lakes within the reserve and White Bear lake in the White Bear Indian reserve. At the last mentioned lake the town of Carlyle has acquired a 99-year lease for camping purposes.

During the past year campers came to Moose mountain from the whole of Southern Saskatchewan, and from towns as far east as Brandon and Winnipeg. Some are picknickers who only wish to stay a few days and others are business men who wish to bring their families out for a month or two. The latter do not wish to tent amongst the underbrush and are anxious to secure somewhat permanent title to a small piece of land so that they may build cottages and beautify and make more convenient their surroundings. They are a class of people whom it would be advisable to interest in the reserve. They would be very ready to appreciate the great courtesy extended to them and very unlikely to do any damage by fire or otherwise.

The needs of the public could easily be provided for by reserving public camping grounds of considerable area on all important lakes or popular resorts by guarding against a monopoly of any point of interest or the obstruction of any trails. There would still remain large stretches of lake front suitable for camping purposes. These, if subdivided into small lots and leased for a term of years at a nominal rental, would enable permanent campers to build cottages and to assure themselves a summer home such as they desire. The adoption of this policy will do much to furnish the people of the prairie towns with pleasant and healthful places in which to spend their holidays, and will on the other hand be of great benefit in popularizing the forest reserves with the people. The presence of large numbers of campers in the reserve in the summer months will make available a very convenient fire fighting force.

The roads at present in the reserve are very wet and extremely hard to travel in June and July. This is an inconvenience to settlers around the reserve who are forced to cross it to avoid wide detours. It is a source of great loss of time to the fire rangers and makes it very difficult for campers who wish to drive out for a couple of days.

The bad state of the roads is due in part to their location on low land, and in part to the fact that they are so narrow the sun never gets at them to dry them. Mr. Rutherford, the forest ranger, went over them with me and together we made plans for the improvement of all the main trails, either by changing their location, widening them or building culverts.

Under the regulations which have permitted the removal of only the dead timber from the Moose mountains, the reserve has been so well cleaned up that at present there is only enough of such material to supply the demand for about one more season. There are, however, scattered in numerous patches, small areas of poplar the majority of which is steadily deteriorating. On account of the damage to which it has been subject from fire and fungi, the greater part of this wood is only fit for fuel. Practically all the mature timber in the reserve is of this class and, outside of a small strip along Fish lake which should be reserved for scenic purposes, all should be cut. It is not only becoming yearly of less value but is a source of infection, spreading the germs of the fungus destructive to poplar, and thus damaging the young growing stock. The reserve is so well stocked that none of the timber is required for seed trees and should be cut clean wherever cut. It would therefore seem that as soon as it is shown that all the available dead timber has been removed the regulations governing this reserve should be so altered that green timber could be cut. Before the season

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starts the ranger can select those areas upon which the stand of timber is in the worst condition and confine the cutting to such areas until everything is removed.

BEAVER HILLS FOREST RESERVE.

Mr. Willing, the Provincial Game Guardian for Saskatchewan, informed me that his department had made an examination of township 27, range 10, west second meridian, lying immediately north of the Beaver Hills Forest reserve, in order to learn its suitability as a game reserve. As a result of the examination the Saskatchewan government desired to have the township added to the Beaver Hills Forest reserve, and constituted a game reserve, in order that they might place there the beaver which they contemplated removing from the Souris river and other streams in settled districts to the game reserve, where they would do less damage and be afforded more protection.

I therefore made an examination of township 27, range 10, and the surrounding country to learn its suitability as a forest reserve. This township is exactly similar in every respect, to the townships which already constitute the Beaver Hills Forest reserve. It consists of rolling land broken by large numbers of sloughs which are the only drainage channels, which stretch almost impassably in every direction and cover about one-quarter of the total area. There are hardly any well defined streams, and those which exist have been so dammed up by beaver as to form ponds.

The soil is a heavy, impervious clay covered with very little humus or loam. It is free from boulders and gravel excepting on the ridges and knolls.

The whole area, together with four or five of the townships surrounding, forms the watershed for many small streams flowing out through the prairie country. Surrounding the hills about eight townships, of which the three townships under discussion form the centre, were originally heavily timbered with poplar. Prairie fires and fires starting from the settlements have destroyed all the timber and at present there are only small clumps of poplar left, and the whole of the remainder of the area is covered with young poplar, grass and peavine.

In spite of the fact that it will always remain quite a distance from the railroad and that it can never be well drained, a portion of the land has been homesteaded. The difficulties of the settlers have been numerous. Wherever a few acres have been broken crops have been unsuccessful every year. The land produces a very light crop of grain and almost regularly, probably on account of the elevation and the cold, wet soil, early frosts kill the crops. The peavine and rich grass furnish splendid grazing. The country is more suited for the production of cattle than of crops.

There is no doubt but that if the land is protected from fire it will rapidly produce dense stands of poplar timber. There is no other source of timber suitable for the use of the settlers within 75 miles of this region. Within this radius the land is more suited for agriculture than are the Beaver hills, is more accessible by railroad and will soon be under settlement. The necessity for preserving a public timber supply in the midst of this prairie region, together with the fact that agriculture is not a success on these hills, should furnish sufficient reason for the protection of timber in the available land in the townships reported upon.

Many of the settlers who have met with nothing but failure for two or three years are on the point of abandoning their homesteads. The settlers on the good land of the prairie are anxious that the Beaver Hills Forest reserve be extended to include as much of the sloughy district as possible.

The greatest need of this reserve at present is fire protection and game protection. There has been no fire guardian, and as a result fires have been very frequent and have every year destroyed large quantities of timber. The game regulations have not been enforced and the small quantity of game remaining is being rapidly exterminated.

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KOOTENAY LAKES FOREST RESERVE.

In September I made an examination of the district surrounding the Kootenay Lakes Forest reserve to report on its suitability for a national park.

The federal government of the United States has lately set aside as a national park and perpetual reserve for the more valuable species of big game an area of 1,400 square miles, comprising the summits of the water sheds of the Flathead, Milk, St. Mary and Belly rivers in Montana. This reserve will be known as the Glacier National Park. It includes about 60 glaciers, a large number of lakes and streams, and a mountain region of unparalleled grandeur, in which there are numerous peaks ranging from 6,000 to above 10,000 feet in altitude. The park will always be a very popular resort for travellers and tourists. It is the home of mountain goats, mountain sheep, bears, deer, elk and moose, and will be a breeding ground from which they may scatter into country where they will furnish good sport and yet will not be exterminated.

The object of my examination was to discover if there was a similar area on the eastern slope of the Rockies in Alberta which could be set aside as a national park and as a refuge for game on the Canadian side of the boundary line.

The time at my disposal prevented me from continuing my examination further north than the drainage basin of the Waterton river south of Newman's peak and west of Belly river. I covered a territory of 191½ square miles, a brief description of which is given below.

The late Dr. G. M. Dawson, in his report on the geological and physical features of the Rocky mountains, stated that the scenery in the vicinity of the Kootenay lakes was not excelled in grandeur by that in any other part of the mountains. Although the Canadian peaks are not as high as the peaks in the Glacier National Park and although there are no glaciers, the area is probably more suited as a national park for camping purposes than it would if it were more rugged. The Waterton lakes, closely surrounded by the mountains, furnish wonderful opportunities for boating, fishing and camping. Within easy access from the lakes are several beautiful valleys and many rugged mountains, from which a view may be obtained of the snow and ice-capped summits of the Flathead range in Montana. The most beautiful and the most rugged Alpine scenery is undoubtedly in the Glacier National Park of the United States, but the best place from which to visit the Glacier National Park and the most pleasing camping places which can be selected as headquarters from which to make pack trips into the mountains are found within the Kootenay Lakes Forest reserve and the territory embraced in my report.

The mountains surrounding the Kootenay lakes are frequented by the big horn sheep, mountain goats, black and grizzly bears. There are also found here the Rocky mountain grouse, ptarmigan and the prairie chicken. The lakes themselves and the streams flowing into them abound in lake and brook trout. The region is so accessible that both game and fish are at present in danger of being exterminated. If the game is protected on the United States side and not on the Canadian, it will only be a matter of a few years until the animals retreat to the mountains of the Glacier National Park, where they will be inaccessible to Canadian sportsman.

Forest fires have killed all the timber within the territory described. There is, however, a thrifty young growth of lodgepole pine which will before many years cover the region and furnish timber.

The country can be of no value for agriculture, and what little grazing there is can be made available to the settlers of the Foot hills even if the territory is reserved.

The discovery of indications of oil along some of the streams has led to extensive drilling operations in the hopes of developing oil wells. Up to the present no paying quantities of oil have been discovered and the several companies interested have to

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all appearances abandoned the search. They have left trails which render the territory more accessible.

This district affords the best summer resort available to the people of south-western Alberta. It is annually visited by increasing numbers from Macleod, Lethbridge, Cardston and the intervening towns. If it is made into a national park or forest reserve no industry will be adversely affected and the people of southern Alberta will have assurance that such a park, which is the entrance to one of the most noted mountain regions of the Rockies, will be given efficient fire and game protection, and will remain always one of the best summer resorts for the people of the province.

The game protection in this region is at present inadequate. Parties have been known to take out as many as 500 trout in one afternoon and the streams are being rapidly depleted. There is no fire ranger in the district. Although there is no mature timber the value of the young timber is such that care should be taken to protect it from destruction.

THE CROWSNEST PASS, ALBERTA.

The coal mines of the Crowsnest Pass, Alberta, are even now, in the early stages of their development, experiencing some difficulty in securing a supply of the timbers necessary for the carrying on of their operations. In order to learn just what the situation was I spent a month in the Crowsnest valley studying the timber requirements of the mines in operation, the possibilities of securing timber locally, the quantity of timber available for mining purposes and endeavouring to find out just what steps should be taken by the Forestry Branch to improve the situation. Chief Forest Ranger Margach, who is thoroughly acquainted with all the details, went down to the Crowsnest Pass with me and spent some time in helping me to get acquainted with the country.

In connection with the report which I submitted I prepared a map of the region showing the area of green timber remaining unburned, the areas of the standing dead timber, of the young timber and of the burned over land upon which there are no trees.

The Crowsnest valley affords a good example of what fire has done to the timber of the eastern slope of the Rocky mountains. Of the 240 square miles included in the valley, 212 were originally covered with a fairly dense forest of spruce, pine, Douglas fir and balsam. At present only 33 square miles remain unburned, 179 square miles having been burned over. Of this latter area 60 square miles are covered with young growth, 34 square miles with dead standing timber, and 85 square miles have been so badly burned and so frequently, that only a few scattered trees remain. It must be a very long time before another forest can be produced.

The 33 square miles of green timber remaining is practically all held under license. The total stand is about 126,000,000 feet. The yearly cut is about 5,000,000 feet and is annually increasing. Twenty years probably will see the last of the present stand of mature timber in the Crowsnest valley.

The mines at present operating in the Crowsnest Pass require annually about 3,000,000 lineal feet of props and ties, and about 2,500,000 board feet of lumber and dimension timber. The props and ties require to be light and strong and are made of round timber 4 inches to 8 inches in diameter at the top. The dead timber standing after the fires of five and fourteen years ago is very suitable for this purpose. There are in the Crowsnest valley about 24,000,000 lineal feet of such timber, a supply which will be sufficient for about eight years. About three-quarters of this dead prop timber is in the hands of the timber limit holders and, under present conditions of sale, costs the mine owner more than similar prop timber purchased in Montana and British Columbia.

The young timber, which is now generally supposed to be of very little importance, will in a few years be the only source of props for the mines of the Crowsnest

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Pass. There are about 60 square miles which after being burned over have come up densely to lodgepole pine. Measurements taken of the growth of timber in the Crowsnest Pass show that lodgepole pine produces prop timber at thirty years of age, but that the most profitable period at which to cut it for mining props is at sixty years. Pine will then produce about 620 8-foot props per acre. The measurements taken of the growth rate of spruce and fir, the timber which will have to be depended upon for a supply of lumber, show that spruce reaches a diameter of 12 inches in 90 years and fir reaches the same diameter in 110 years. The young growth is now 5 to 14 years old, consequently it will be producing mining props in 15 years and lumber in from 75 to 95 years.

Granting that the pine produces 620 props per acre at sixty years of age, and that the requirements of the southern Alberta coal field for 1913 are only 5,500,000 lineal feet of props, it will take 66,000 acres of pine to produce a continuous supply of props. The mines must have an assured supply of props and there are 66,000 acres of territory, immediately surrounding the mines, fit for nothing else than the growing of props.

The denuded area, 85 square miles in all, upon which there are no, or very few trees lies mostly in the valley bottoms and on the lower slope. Excepting for small meadows along the streams, the soil is a sterile gravel covered with thin dry sod. The market conditions are such that where there is a fair soil and good grazing, a comfortable living can be made by growing produce for the mines. All the locations upon which this is possible have been homesteaded. The remainder of the denuded area, nearly the whole of it, is unfit for anything but the growing of trees. If it is protected from fire it will gradually seed up. Before natural reproduction has covered the whole area with forest growth, it may be advisable to hasten the process by employing such methods of seeding as were discussed for the Pines Forest reserve.

It is very important that a forest should be maintained on the eastern slope of the Rocky mountains. The settlement of the prairie is creating a constantly increasing demand for lumber and the cheapest lumber on the southern prairie will always be that cut on the eastern slope.

Cheap mining timber is necessary for the production of cheap coal, and lumber and mining timber are the only crops possible from the greater part of the eastern slope.

The watershed of the eastern slope supplies 98 per cent of the water on the prairies. According to the highest authorities the forest on a watershed modifies violent stream fluctuation and thus prevents damage to irrigation ditches and makes available a larger supply of water during the irrigation season.

Maintaining a forest on the eastern slope does not mean an annual expense, beyond that necessary for fire protection. Unless there is fire protection there can never be any public or private revenue from the land and if there is fire protection there will always be both public revenue and private profit from the timber that will be naturally produced on land unfit for anything else.

The present system of fire ranging has been as efficient as was possible with the money at the disposal of the department. The greatest losses from fire occurred before the present system was inaugurated. The increasing value of the young timber, the increasing danger of forest fires arising from the development of coal mines, and the advance of settlement, render it necessary that more attention be devoted to the protection of the eastern slope forests from fire. If a larger force is employed on the eastern slope, as should be done, it will be necessary, in order to secure the most efficient service, to have some one in charge whose duties do not require him to leave the territory during the fire season, and who can devote all of his time to the administration and supervision of the work. The present chief ranger, Mr. Margach, has done good work by securing the co-operation of the limit holders and the mine owners,

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but he has been severely handicapped by other departmental duties which have required his absence from the territory.

Under the present regulations all, or nearly all, trees under 10 inches in diameter are left. Almost inevitably these are destroyed by fire or wind and the timber is lost. The loss per square mile through trees thus left is about 200,000 lineal feet of mining props and 190,000 feet, board measure, of lumber.

The idea in leaving these trees is presumably in order that they may grow to a larger size for a subsequent cutting or that they may seed up the ground. Neither of these objects is served in this particular locality. The trees are so scattered that if they are not burned they blow down or are killed by the sun which gets in and dries the soil, nor is good natural reproduction secured because the trees are left. Where the timber is all removed the cones which are left on the ground supply just as good reproduction of jackpine as is secured where seed trees are left standing.

There is a waste in logging operations in the Crownsnest Pass which seems unnecessary where the timber is so accessible and so valuable. There are left in high stumps, long tops, rollways and lodged trees, timber which brings the total loss per square mile up to 360,000 lineal feet of mining props and 400,000 feet, board measure, of lumber.

This lumber is accessible and should be taken out. In order to conserve a supply which is not too great and to secure for the government a revenue which is otherwise lost, the lumbermen should be encouraged to take it out. The governments of Quebec and the United States are, by increasing the dues on merchantable timber left in the woods, encouraging the lumbermen to remove everything that can profitably be removed. The result of such a policy is a larger production of lumber from the limits, less danger from fire and better prospects of a future crop.

Wherever it is possible for a family by industry and intelligence to make a living on a quarter section they should be encouraged to do so, but in a mining district like this, where there are very few locations where profitable homesteading is possible, care should be taken that no land is thrown open for homesteading that is unfit for agriculture, or ranching. There are always people who are ready to enter for a homestead even if there are only 25 acres of land on it, so long as there is a chance to make a living for a few months by selling what little timber there may be in the neighbourhood.

Homesteads in the mountains would be made more valuable and those owning them would be able to make a better living if the law were changed so that homesteads could be entered by legal subdivisions instead of by quarter sections. The meadows are almost the only sites suitable for homesteading. They are often so badly cut by the survey that a meadow only covering an area of 150 acres may be divided amongst three or four quarter sections. It is thus unavailable for any one family, whereas if it could be described and entered by legal subdivisions to the extent of 160 acres, the whole of it might be made available for one homestead and might be made a valuable property.

It would meet with the wishes of mine owners if all the land unfit for agriculture could be retained by the government to provide a perpetual supply of mining timber to be made available upon fair terms whenever it might be needed. The adoption of this policy would mean that no land unsuited for agriculture should be homesteaded; that the timber limits, as fast as they are cut over or burned over so as to be valueless for the present production of timber, should revert to the government, and that the whole territory be given efficient fire protection.

North and south from the Crownsnest Pass on the eastern slope of the Rockies, are similar areas about which there is very little definite information. It would seem advisable that a reconnaissance survey should be made of districts so important for their timber and water supplies in order that definite information concerning local

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conditions might be obtained, and that a general plan might be outlined for the fire protection and management of the whole area.

STATISTICAL WORK.

With your permission I have discussed with Mr. Kellogg, Associate Forester of the United States Forest Service, methods of organizing an annual census of forest products in Canada, and I hope to be able, beginning with 1908, to secure complete data upon the consumption and production of all different forest productions of the country. It is likely that the publication of such information will do much to point out the necessity for provincial and national forest protection and regulation.

Your obedient servant,

H. R. MACMILLAN.

APPENDIX No. 3.

GENERAL REPORT FOR 1908 OF J. R. DICKSON, ASSISTANT INSPECTOR
OF FOREST RESERVES.

OTTAWA, March 25, 1909.

R. H. CAMPBELL, Esq.,
Superintendent of Forestry,
Ottawa.

SIR,—I beg to present the following report for the season of 1908 :—

On June 1 orders reached me to take charge of a forest survey in the Riding Mountain reserve. A party of ten started in at the village of Ochre river on June 12 and proceeded up the Ochre trail to Clear lake, about forty miles, working the country on both sides. At that point we joined up with the 1906 survey, and crossing the Strathclair trail passed west through the Galician settlements bordering the south boundary of the reserve. As we moved along, three sub-camps were placed well into the reserve. Then entering the Birdtail valley I went northwest with a party of four over the Russell, Indian, Fisher and Gambler trails, completing in that way, by aid of a couple of pony trips made later south of Gilbert plains, a rapid reconnaissance survey of almost the entire 'West End.' The average number of student assistants throughout the season, was eight, and during the four months of field work we placed twelve main camps and four sub-camps. On October 16, the survey broke up and the outfit was stored at Grandview.

OBJECTS SOUGHT.

In order to decide on even a simple plan of management for any forest area, it is necessary to know its conditions of soil and climate and the general nature of the country; to survey the trails and locate the main forest types; to find out the area and quality of mature timber for immediate cutting and the nature and quantity of young growth, the basis for future crops. Finally there are large portions of burnt

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over and prairie lands, the area and location of which must be known before any re-forestation is attempted, and in connection with this work, a study of habits, growth rate and relative commercial and local utility of the various species available is necessary, before deciding which to favour and propagate under future plans. As in previous years, therefore, the object of the work was necessarily general in its scope, namely, to take stock of existing resources and make a study of all the conditions and factors that will influence future management.

Owing to the nature and object of the survey the area covered can only be given as an approximate figure. In whole or in part thirty townships were traversed, about 660 square miles being mapped and studied and the important trails surveyed. Of this area, 115 sections lay in the east end and 545 in the west end.

Along the Ochre trail, where there is still considerable timber, valuation survey methods were followed as in former years, but in the west end, which has been largely fire-swept, taking notes and making maps was the important work. The more important trails were surveyed and plotted as the party advanced.

The season of 1908 left little to be desired from a field work standpoint. It was so dry that many trails were available which in 1907 were entirely impassable. This not only made transportation easy but allowed the field parties to be almost constantly at work.

A sketch of the work already done in the Riding mountains by the Forestry Branch, also the general conditions prevailing, and the necessary requirements of the provisional plan of management appear in a recent bulletin on the subject. The following is a brief summary :—

FIELD WORK DONE.

During the past three seasons' work on this reserve, 1,170 square miles have been studied and mapped with that degree of completeness which the value of the timber or other conditions appeared to justify, leaving therefore 365 square miles scattered through the reserve upon which forest survey work has not been done, although on at least half of this area we have a fair knowledge of prevailing conditions.

The purpose of a working plan report for a forested area is to set forth clearly yet briefly all the facts and conditions affecting such timber tract likely in any way to prove useful or necessary in the work of laying down plans for its future management.

The Riding Mountain Forest reserve comprises 1,535 square miles of rough mountainous country in west central Manitoba. It is of great importance because of its being one of the largest of the federal timber reserves and situated in the midst of a populous community whose demand for its products has already reached large proportions. The land surface consists of two rolling plateaus some 400 and 900 feet respectively above the Dauphin plains. This entire range of hills being purely of glacial origin, the soils vary from gravels and light sandy loams to the heaviest boulder clays.

FOREST TYPES AND PRESENT TIMBER CONDITIONS.

The timber over the whole area has suffered to such an extent by fire and disease that there is comparatively little first-class saw material left. The west half of the reserve was largely swept by two great fires some 20 years ago, but a good growth of young poplar now occupies the ground. There are still several small areas of good spruce and jackpine in the east end, but most of the timber there remaining is mature poplar, which is very defective. As white spruce is the most valuable and rapidly

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growing timber tree of the region it should be favoured over all others in future logging and reforestation operations.

The following estimate of the saw material on the reserve is based on the knowledge obtained during the past three years, and includes the timber 8 inches and over at breast height :—

Species.	Board Feet.	Per Cent.
Aspen poplar.....	85,350,143	41
Balm (Balsam poplar)....	27,032,691	13
White spruce.....	42,135,088	20
Jackpine.....	11,267,500	5
White birch.....	15,172,356	7
Larch	9,135,096	4
Black spruce.....	17,096,112	8
Balsam fir.....	3,328,000	1.5
Total.....	210,740,347	99.5

(Other species, .5 per cent.)

AREA DISTRIBUTION OF RIDING MOUNTAIN FOREST RESERVE— APPROXIMATE STATEMENT.

	Acres.	
Water.....	95,000	25 per cent carrying pole stuff.
Swamp and muskeg.....	140,800	80 per cent carrying reproduction.
Brule.....	369,600	
Semi-brule.....	51,608	
Prairie to semi-prairie.....	104,073	
Timbered.....	221,319	
Total area.....	982,400	

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CORDWOOD IN SAPLINGS ON RIDING MOUNTAIN FOREST RESERVE.

Cordwood.	Muskeg Type.	Cords, 87,480.	Per acre, 2.5 Cords.
Basis—All trees 4 in. to 7 in. taken at 5 cubic ft. per mean sample tree (which is 6 in. D. B. H.).	Jackpine	27,955	4.8
	Green poplar	134,111	2.4
	Over-mature poplar	48,576	3.0
	White spruce	72,098	6.7
	Mixed type	316,160	3.8
	Semi-brule poplar	55,328	1.9
Total		741,708	

MARKET AND LUMBERING CONDITIONS.

During the last ten days of October I made under your direction a study of permits in the Dauphin land office, and a report on the same was duly sent in. The number of permits issued in this land district fluctuates widely from year to year, but on the whole, 90 per cent of those granted on the reserves are in the Riding mountains, clearly proving this reserve to be at present easily the most important one in the province of Manitoba. A study of the markets and lumbering conditions about the reserve with special regard to aspen was also made at this time. Several of the large mills were visited and the owners interviewed. Up to the present, so far as I could learn, there has been no such thing as commercial poplar lumbering attempted on a large or small scale, in any part of the Riding mountains. The large mills may saw a good poplar log now and again but they only figure on the spruce log run, while the small millmen, who have no limits, are prevented by regulations from extending their operations beyond the farmers' permits. It was the decided opinion of every lumberman seen, that poplar lumbering will not pay under existing conditions.

Poplar has as yet no recognized place in the general lumber markets of the west. Poplar prices are not quoted in Winnipeg, and even in the Dauphin district one seldom finds any poplar in the local lumber yards. There is no available market as yet to which Riding mountain poplar could be shipped in commercial quantities. All the surplus spruce cut on limits in this district goes west over the Canadian Northern Railway lines to find a ready market in Kamsack and other prairie towns. Doubtless also if poplar lumber were properly seasoned and graded, in quantity sufficient for the trade, a profitable market could be created, especially for flooring and box material, but this will not occur while spruce lumber remains at present prices.

The forest of the lower plateau consists for the most part of aspen and balsam poplar, with in places a large inclusion of paper birch, and in the ravines a scattering of elm, oak, ash and maple. On the upper plateau poplar is still predominant, but the forest is much more mixed in character, more or less coniferous growth being everywhere present, with considerable areas given over almost wholly to spruce, larch and balsam, or, in the drier parts, to jackpine.

Soil moisture determines three main permanent forest types: larch on the swampy areas, white spruce on the fresh to moist loams and jackpine on the dry sandy soils. But, as stated above, fire types, such as poplar and birch everywhere intervene. Owing

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to the slashed, diseased and burned conditions of the stands of timber on this reserve the annual balance between growth and decay is very difficult to estimate. We know, however, that the former exceeds the latter by at least 25,000 cords.

The population about the reserve, while mixed, is largely of British origin, and will be quick to recognize and approve all common sense measures looking toward its greater utility and improvement.

The market, owing to the nature of the merchantable timber, will be a local one and farmers' one in the main. A study of the market situation as affecting lumbering methods was made in October, several of the prominent lumbermen of the district being interviewed. They cut only spruce and a little larch, there being absolutely no market for poplar in commercial quantities.

DANGER TO THE FOREST.

Fire, fungi, insects, wind and frost have all been more or less destructive. Fire especially has swept away millions of dollars' worth of timber within the last 25 years, while the ravages of the hoof fungus have made large areas of standing poplar hardly worth lumbering.

To protect the timber from fire and trespass, there is now a staff on this reserve consisting of a chief fire ranger and four assistants, who have done much good work during the past two years. But more men are urgently needed for its proper safeguarding and administration.

PROVISIONAL PLAN OF MANAGEMENT.

The aim of all suggestions made or methods outlined in this provisional plan is simply to introduce a more far-sighted management of the resources on this reserve than has hitherto been attempted. Clearly, in advance of any actual regulation in a technical sense, an initial period of upbuilding and restoration will be necessary, for only after the present abnormal forest conditions have been reduced to something like normal, will it be possible with any accuracy to predict future returns or prepare a practical working plan based on annual production. The main objects now are :

(1) To provide for the wise and generous use of existing timber to meet settlers' requirements and popularize the reserve.

(2) To select and apply that silvicultural method best adapted to meet local future requirements.

(3) To introduce the best systems for protecting and administering the reserve.

The basic requirements of the situation are :

(a) To assure and convince public opinion that there is real utility and benefit to be gained by maintaining this reserve, the source of their supply of wood and water.

(b) To make the use of all the reserve products as ample and easy as possible, thus winning the confidence and support of every settler.

(c) To direct all cutting and refuse disposal in the woods with the object of securing a permanent and increasing yield in the forest.

(d) A full recognition of the enormous past losses and present dangers from fire, and the steps necessary to overcome it.

(e) To build up a more efficient and useful ranger service by a recognition of duties and functions, and the securing of a better-trained and more mobile personnel, devoting all their time and energies to government business. Along with this advance in methods of actual field work, the local office end of reserve management must also be made adequate to give complete control of the hay and timber sales business ; the receipt and filing of all permit records and reports, and cheerful, prompt consideration of all public correspondence and inquiry.

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(f) To consider where and in how far the work of reforestation should be prosecuted, and whether, considering the limited funds available, serious danger of fires and crude protective service justify such efforts at the present time.

(g) To carry on all improvement work on the reserve according to a definite plan. For instance, the whole ultimate system of trails, bridges, ranger stations, nurseries, compartments, &c., should be projected and mapped as soon as the available data bearing on these points will justify. Then all future work of the rangers is directed toward the fulfilment of this scheme.

MARKING TIMBER IN THE CYPRESS HILLS.

From November 20 to December 22 I was engaged in remarking the boundary lines of a small timber berth in the Cypress hills, Alberta, and stamping according to government regulations all the trees to be cut thereon.

All trees above a certain designated diameter at breast height, or $4\frac{1}{2}$ feet from the ground, were to be distinctly marked for removal. This 'diameter cutting limit,' as it is called, is fixed in this case at 10 inches. To measure all doubtful trees a pair of calipers is necessary, and to ensure that only the desired trees shall be cut, some distinctive stamp must be used. The first marking hammer tried was found of little use, being a log-end stamp and not suited for bark. To use it, the services of a boy were required to first remove the rough bark with a hatchet. Later a stamping hatchet was tried, which instead of the three small letters 'D.F.R.,' had one large 'F.' on the back. This combination dispensed with the boy, but it is not distinctive enough, as with an ordinary cold chisel the stamp can be easily and quickly duplicated.

The above experience has shown, therefore, just what sort of tool is required to properly mark the trees most cheaply and easily, a 3-pound, east steel hatchet with a simple but distinctive stamp on the back.

Marking in Different Species.

If marking is to be a practical operation, the problem of securing the results it aims at in the cheapest possible way, must be the forester's chief study. Such being the case, his methods vary with different species, and in a general way the following principle will hold good. With tolerant species, such as spruce, hemlock or even white pine, those which form uneven-aged stands, the trees *to be moved* should be marked, while in the case of intolerant species, which form even-aged stands, like the jackpines and poplars, the trees *to be left* should be marked, whether the latter are scattered seed trees, or the boundary trees of a cutting area.

The Work of Marking.

In the Cypress hills case, the arbitrary diameter limit was strictly held to, all doubtful trees being calipered both ways and averaged to a tenth of an inch. That is, if 9.5 inches in diameter they were left, but a diameter of 9.6 inches placed them in the ten-inch class and they were marked for removal. To make mere size the sole criterion, however, is not the best policy; it is not flexible enough. To secure the best results the forester must be allowed discretionary power. Such exercise of judgment is necessary for various reasons, viz., where one or two trees in a vigorous clump of spruce are just over the diameter limit, as often happens, and to cut these out means destruction to the rest, the forester would not mark them, but leave the whole intact for the sake of enhanced future profits. It would be good business, good silviculture and therefore good forestry. Again, on a hillside where rigid adherence to the cutting limit would result in disastrous windfall, the forester should be empowered to use his judgment in raising that limit enough to prevent such a result.

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The forester could overcome cases also where an insufficient growing stock would be left to form the next crop if permitted to reserve a few seed trees above the cutting diameter limit.

Finally, he could do the work more quickly and cheaply.

Cost of the Work.

The cost varies widely with varying conditions and the thoroughness with which it is done. Where the trees are limbed to the ground, and the country is very rough, one can only mark from 300 to 500 trees per day, especially those short days of early winter when this work is usually done. In the Cypress hills work, besides the above difficulties there was also a ragged debris over the most of the area, and the labour of climbing through and over this reduced the above figures down to about 250 trees per day on the average. Of course, the trees were calipered and each one blazed and stamped twice, once below stump height, once above. The cost of such work is very high and would make it impossible to the average lumberman. But as an experiment and because of the peculiar conditions in the Cypress hills the government undertook it.

In an ordinary virgin spruce stand in rolling country where a man could stamp 600 trees per day, the relative cost would be very much less, and if judgment were substituted for the calipers, and each tree marked only once instead of twice, all the benefits possible could be obtained at a comparatively trifling expense. Where one-foot stumps are required by the regulations, it seems to me that one stamp below stump height on each tree meets every requirement. If the snow is so deep that the mark cannot be found with comparative ease it will be quite too deep for getting one-foot stumps. And this truth will apply just as well of course to any other height of stump. Moreover, the upper mark is of no value as a check on the work, for when the logs are piled in the mill-yard only one in a hundred of these marks can be seen. That is to say, the stump will secure every object sought for, and the resultant saving of time will make the work very much cheaper.

The method of work which proved most rapid was to carry back and forth across the area a strip approximately one chain wide, and mark all trees on the same side. For instance, if work were begun on the west border of the tract, all trees would be marked on the east side. This little point is important, because it enables one, while working alone, to cover ground rapidly and not miss any trees, a compass being quite unnecessary.

Granting, then, that a forester being paid \$6 a day, marks 600 trees, in timber which runs five trees to the thousand feet, board measure, we find the cost of such marking to be five cents per M.

CONCLUSION

(a) It is absolutely necessary in those parts of the west where the low rainfall and strong dry winds give a high evaporation co-efficient, with its concomitant, poor conditions for natural reproduction, that in spruce woods at least every tree be marked before cutting begins.

(b) The ten-inch cutting limit chosen for this tract proved to be just right, as it secured all the good merchantable timber while leaving the thrifty young trees of rapid taper and growth and not opening up the stand enough for the destructive entrance of wind.

(c) So inexpensive and yet of such immense practical utility is good marking as a means of perpetuating spruce forests (provided the presence of balsam does not render that result all but impossible), that it would seem to offer a very legitimate and promising field in the immediate future, for co-operation between the government and

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those lumbermen who, while anxious to operate conservatively, do not feel that their interests are extensive enough to justify the engagement of a forester.

In connection with this lumbering job at least two essential conditions for good work were made very clear :

(1) The necessity of having all parts of such an operation proceed simultaneously, thus leaving the work completed as it progresses.

Where the permittee lets all the work to a contractor who in turn sublets it to others there is grave danger of losing proper control. For instance, if the brush is not disposed of at time of lopping, it becomes so bound together by the skidding or partially buried by subsequent snowfall that it must be left *in situ* till spring, and to remedy the mistake then entails additional expense and friction to all parties.

(2) Advisory inspection while the work is under way.—This is because careful conservative methods of logging in Canada are as yet mostly in the educational stage, and mere rules carry little weight with lumberjacks and logging bosses, unless an official is on the ground to explain and enforce them.

As for the perennial problem of brush disposal, it can at least be said that no general solution of uniform applicability is possible; the question is in each case an open and relative one. Due consideration must be given to the fire danger, the best conditions for reproduction, and the cost. In the Cypress hills, where securing moisture for the desirable spruce seedling is the important factor, thorough scattering of the brush away from the logging roads and the burning of that which is piled up alongside them secure this main object in a large measure while also reducing the fire danger by changing the trails to fire lines, the whole being done at moderate cost.

Respectfully submitted,

J. R. DICKSON,

Asst. Inspector Forest Reserves.

APPENDIX No. 4.

REPORT OF C. A. WALKINSHAW, FOREST RANGER.

DEPARTMENT OF THE INTERIOR,

DOMINION LANDS AND CROWN TIMBER OFFICE,

BOISSEVAIN, MANITOBA, March 27, 1909.

R. H. CAMPBELL, Esq.,

Superintendent of Forestry,

Ottawa, Ont.

SIR,—I beg to submit herewith my annual report in regard to the conditions in the Turtle Mountain Timber reserve for the past year.

In the first place, I am sorry to say that we had bad fires in the reserve last spring. Owing to the dry and hot weather accompanied with high winds, it was impossible to get them under control, and although my assistants and myself worked day and night, the result was that a large part of the reserve was burned over, which was duly reported to you.

When all danger from fire was over, Mr. Knechtel, Inspector of Forest Reserves, supplied me with pine and spruce seed and instructed Mr. Thomas Scott, my assistant, and myself how and where to plant them. I went strictly by instructions, and when

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Mr. Knechtel and I inspected them late in the fall, we found that all of those planted in the grass had germinated, looking healthy and strong, especially the bull pine. Unfortunately, a large percentage of the seed planted amongst the young trees had been eaten by mice or birds.

I am satisfied that if that had not happened at least ninety per cent of the seed planted would have germinated.

I hope that the department will supply me with a large amount of seed this spring, so that I may be enabled to reforest a good part of the reserve that was burned over.

I may say that all the squatters have left the reserve with the exception of Mulholland and Maddess. They were ordered by the county court judge last fall to leave the reserve not later than April 1, 1909. I communicated with Mr. George Paterson, of Deloraine, who represents the Department of Justice in this case, asking him to see that the judge's order was obeyed. He answered me assuring me that it would be put into effect.

As instructed by Mr. Knechtel, Mr. Scott and I staked out the international line between Dakota and Manitoba, the southern boundary of the reserve. I found this a very difficult job, especially finding the mounds, owing to the rank growth of young trees and other vegetation.

I was pleased to receive a letter during the summer from Mr. Thompson, Professor in the School of Forestry at Bottineau, North Dakota, requesting information regarding protecting Turtle mountain from fires. I gave him all the information I could; I also visited him at Bottineau. He assured me they would do everything in their power to assist us in preserving Turtle mountain against fires. He also gave me a copy of a bill that he had presented to the legislature of North Dakota in the interest of fire protection. I mailed the copy to Mr. Knechtel at Ottawa, along with a request to assist in having it passed.

There have been issued during the past winter permits for over two thousand cords of dry wood and for over two thousand feet of logs. The wood cut was mostly dry. Any that was cut from trees burned last spring was charged twenty-five cents per cord.

Your obedient servant,

C. A. WALKINSHAW,

Forest Ranger.

APPENDIX No. 5.

REPORT OF JOHN RUTHERFORD, FOREST RANGER.

DEPARTMENT OF THE INTERIOR,

DOMINION LANDS AND CROWN TIMBER OFFICE,

CARLYLE, SASKATCHEWAN. April 7 1909.

R. H. CAMPBELL, Esq.,
Superintendent of Forestry,
Ottawa, Ont.

SIR,—I beg to submit my annual report regarding conditions in the Moose Mountain timber reserve. As a result of the favourable season there has been a splendid growth of young timber, and the damage done by fire has been practically nothing, as there was but one small fire in the scrub, which was promptly extinguished.

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The supply of dry and fallen timber is now almost exhausted. The number of permits issued was hardly as large as in previous years, owing to the greater amount of coal now being used. The opening up of the trail from Fish lake to the old government road is a great convenience to the public as well as the ranger patrolling, and I would strongly recommend the widening of the trail through the Indian reserve from the Indian agency to the government road at Skeleton lake in view of the actual need of this trail as a road to Fish lake and a good fire-guard.

In conclusion I wish to say that the open season for deer should be closed for a number of years, as they are falling off in number to an alarming extent, owing to so many hunters hunting in the open season.

Your obedient servant,

JOHN RUTHERFORD,
Forest Ranger.

APPENDIX No. 6.

REPORT OF JOSEPH COXE, FOREST RANGER.

DOUGLAS, April 6, 1909.

R. H. CAMPBELL, Esq.,
Superintendent of Forestry,
Ottawa, Ont.

SIR,—I beg to herewith submit my annual report in regard to the conditions in the Spruce Woods Timber reserve.

In the first place, I would like to say that the general conditions have been very favourable during the past year, owing to the fact that there has been very little damage done by fire. We have had a few small fires, but they did very little damage, if any, owing to the fact that there was very little timber in the places where the fire ran.

We planted 10,000 Scotch pine along with the others we had already planted, which were making a good growth. We also pulled and shipped about 30,000 small tamarack trees to Indian Head station for the nursery there. We also planted a large number of seeds of various kinds in the spring, as well as sowing a quantity last fall. We also picked 40 bushels of spruce cones, and pulled and shipped a car of moss for the nursery at Indian Head. We prepared and planted an experimental bed with seeds late in the fall.

Your obedient servant,

JOSEPH COXE,
Forest Ranger.

APPENDIX No. 7.

REPORT OF NORMAN M. ROSS.

DEPARTMENT OF THE INTERIOR, FORESTRY BRANCH,
NURSERY STATION,

INDIAN HEAD, SASKATCHEWAN, March 27, 1909.

R. H. CAMPBELL, Esq.,
Superintendent of Forestry,
Ottawa, Ont.

SIR,—I have the honour to submit herewith my ninth annual report, dating from April 1, 1908.

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Though the past season has been generally favourable to tree growth, unfortunately the winter of 1907-8 was the most trying since the commencement of the work, on all classes of young trees, shrubs and perennial stock. The fall of 1907, being wet and cold, was unfavourable to the early maturing of the new growth, while the winter was comparatively mild but very free from snow. The ground was very bare and exposed to strong drying winds, causing considerable damage even to a great deal of stock usually considered quite hardy. In our plantations the cottonwood suffered to the greatest extent, a considerable proportion of the new growth being killed back and in some cases the tree killed outright. In certain districts the ash and maple also suffered, though not to the same degree.

This trouble was general over the greater part of the three provinces, with the exception of southeastern Manitoba. In central Alberta the plantation suffered most. Following along the foot hills from about Olds to Cardston on the Macleod-Edmonton line there is a strip of country extending some miles east of the railroad with a comparatively high elevation, within which area experience seems to indicate that conditions for tree growth are more unfavourable than in other parts of the prairies. It will be necessary here to select most carefully the varieties for planting. In this district the Manitoba maple as a general thing has not given satisfaction, while the cottonwood frequently kills back in the most discouraging manner. The varieties which appear at present most suitable are the hardy willows and Russian poplars. The caragana seems to be hardy and could be introduced into the plantations to good advantage as a filler and nurse.

Though discouraging in many respects, such winter killing must be expected periodically, whenever the weather conditions are unfavourable to an early maturing of the new growth.

Growth during the past summer was very good. In most cases where winter killing was experienced the damage was entirely overcome by the more luxuriant growth of this season. The weather conditions in the fall of 1908 were very favourable to the early ripening of the young wood, so that we do not anticipate a repetition of the winter killing this year.

INSPECTION WORK.

In connection with the co-operative tree planting system the following were employed on inspection work :—

A. Mitchell,	W. Guiton,
A. P. Stevenson,	Jas. Kay,
J. Caldwell,	Jas. N. B. McDonald,
A. McIntosh.	

A brief report from each of these inspectors is appended, giving more detailed information as to districts covered and local conditions affecting the plantations.

As a whole the reports are most satisfactory, both regarding the success of the plantations and the greatly increased interest and general activity in tree planting all over the prairies.

Owing to the development of the work it was found necessary to appoint Mr. Arch. Mitchell as my assistant. Mr. Mitchell was, during the first few years of the operation of our tree planting system, engaged during the summer months as an inspector. He is particularly qualified for the position he now occupies, owing to his training in forestry work in Scotland and England, together with several years' experience of prairie conditions, particularly in Alberta, where since 1899 he has been actively engaged in agricultural work, devoting a large portion of his time to the subject of tree culture.

Two new inspectors, Jas. Kay and Jas. N. B. McDonald, were appointed this summer. Both have had several years' training in forestry on Scotch estates, and

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after considerable practical experience on the nursery station here, were considered competent to undertake inspection duties.

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OFFICE WORK.

A great change was effected this season by transferring all office work in connection with the Tree Planting Division from Ottawa to Indian Head, thus centralizing the work and thereby making it more effective. This change seemed necessary for many reasons: First, large numbers of inquiries were being received at Ottawa requiring knowledge of local conditions before intelligent advice could be offered; second, considerable delays were frequently and unavoidably encountered in correspondence with applicants regarding the tree planting work, which, especially in the spring, often resulted in the necessary postponement of planting operations for another year; third, the correspondence at the nursery station was increasing so rapidly that it would, in any event, have been necessary to provide some suitable office accommodation; fourth, the inspector's reports and sketch plans were not always so satisfactory when worked up in the office at Ottawa as they should have been. By employing in the office only men who are thoroughly conversant with our inspection work and with local prairie conditions it is hoped to greatly increase the efficiency of this work.

The office was opened in rented quarters in town during the early part of November, 1908. Though it was some time later before the necessary stationery supplies, &c., were received, the work accomplished in this office is very considerable.

The office staff at present consists of Mr. Mitchell and tree planting inspectors Guiton, Kay and McDonald. The indexing and filing is under the charge of Miss Lauder. The inspectors prepare plans for the guidance of those applicants who are to receive trees, make up the distribution lists, and later on the lists of those to be inspected during this season.

Since its opening on November 1, 1908, we have received at this office 7,723 pieces of mail matter, principally inquiries regarding our tree planting work and applications for planting material and information.

During the same time 8,431 letters have been mailed; many of these are of course circular forms, &c.

Since opening we have started 3,640 new files. With the system of book and card indexing this entails a very considerable amount of work. Owing to the great development in railroad extension and in the general settlement of the country we find it very difficult to keep the indexes up to date, as new post offices and new express offices are being opened every day. We frequently find on file three or four letters from the same correspondent, each one giving a different post office address.

When properly equipped there is no doubt that our tree planting work can be much more effectively handled from this office than was possible when all correspondence was carried on from Ottawa.

To date we have 2,235 new applicants.

In the spring of 1908 trees were furnished to 1,424 applicants: 464 in Manitoba, 659 in Saskatchewan and 301 in Alberta; the number of trees distributed being practically 1,800,000. During the winter 1,002 planting plants were prepared and sent out.

We have on the distribution list being compiled at present the names of 2,010 applicants to receive trees this spring. According to provinces there are 559 in Manitoba, 1,095 in Saskatchewan and 356 in Alberta. To furnish these applicants we have heeled in at the nursery some 2,570,000 seedlings.

The following summary will give the best idea as to the popularity of the work among the settlers: Number of applicants on inspection lists, summer of 1908, 3,734; number of applicants who received trees spring of 1908, 1,424; number of applicants to receive trees in spring of 1909, 2,010; number of new applications received to date

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for trees to plant in 1910, 2,235 ; number of applicants to be visited in 1909, about 4,900.

As the inspectors' lists for 1909 cannot be accurately compiled for several weeks yet the last figure, though not definite, is approximately correct.

SCOTCH PINE PLANTING ON SPRUCE WOODS RESERVE.

The experimental plantings on the reserve were not extended this spring (1908) ; 11,000 two-year Scotch pine seedlings were planted in blanks of last year's plantation as owing to unfavourable season of 1908 a considerable number of the young plants failed to become established.

These experimental plantings were started in 1904 and have annually been added to, till at the present time the area set out aggregates about 25 acres. The planting has been limited to Scotch pine. The stock used has all been grown at the Nursery Station at Indian Head. In the first two years trials were made with seed of the native jack and lodge pine and the Scotch pine, and with one and two-year seedlings of Scotch pine. The results from the two-year seedlings are the only ones at all satisfactory. The one-year stock nearly all died. The seed in most cases germinated, but at present date the seedlings from seed sown in 1904 are barely an inch high, while the two-year old stock planted in 1905 are from a foot to over two feet. The seed was sown in 1904 in spots, prepared by spade about a foot square. In 1905 the seed was sown in the bottom of a shallow furrow and lightly raked in. It is possible that the reforestation by seed may be successful in certain sections of this reserve, namely, in the more hilly parts where there is some shelter afforded by poplar and willow shrubs; but on the level open portions conditions appear most unfavourable. Here it is almost certain that planting must be resorted to if successful results are desired. The system of planting as practised during the past three seasons, which I have described in previous reports, has given most encouraging results. Using two-year stock the cost per acre is comparatively small. Two year seedlings can be grown at considerably less than \$1 per 1,000 dug ready for planting. The actual planting under the system referred to, and under wages paid in 1906, was approximately \$5 per acre. It is doubtful if seed could be efficiently sown at a very much less cost than this.

As stated in my last report, Scotch pine was used, not because it was considered the best variety for the situation, but for the reason that the seed was readily obtained and stock easily propagated, the object of the plantings being chiefly to ascertain the probable cost of planting and the results likely to be attained from a very rough method of planting with the use of seedling stock. The success with the two-year stock would seem to indicate the inadvisability of using comparatively expensive transplants as this would greatly increase the initial cost of planting.

EXHIBITS.

The usual exhibit was again prepared for the summer fair at Brandon.

This season, at the request of the fair board, it is proposed to prepare an exhibit at the Calgary show.

In connection with these two exhibits, which will consist mainly of enlarged photographs of prairie plantations, it is the intention to set out in a suitable portion of the grounds demonstration plantations, showing varieties hardy in the locality and suitable for prairie windbreaks and plantations. The exhibition boards at both Brandon and Calgary are most anxious that such plantings be done. It is doubtful if any trees can be set out till 1910, however, as this season will be needed to get the ground in a suitable condition for the planting.

This kind of exhibit will undoubtedly prove much more valuable from an educational standpoint than the class of exhibit as prepared heretofore, and will naturally

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increase in value and instructiveness year by year. In connection with this planting it is proposed also to lay out a small nursery such as any farmer might have in connection with his home garden in order to raise his own planting stock on the farm.

LECTURES, &C.

The results of the work of this division have been generally disseminated, together with information relative to the establishing of prairie plantations, by the following means :—

Farmers' Institutes.—During the whole month of February Mr. Mitchell attended farmers' meetings in Alberta. Mr. A. P. Stevenson, during the same time, lectured in Saskatchewan and I personally attended institute meetings for one week.

Special Lectures.—Mr. Mitchell gave two special lectures in Calgary before the local horticultural society and the students of the normal school, while I addressed a farmers' convention at Regina on January 20 and also delivered two addresses before the Western Horticultural Society Convention in Winnipeg, February 18 and 19. These special lectures were illustrated by lantern slides.

Bulletins and Pamphlets.—Large numbers of Bulletin No. 1 on 'Prairie Tree Planting' have been sent out, two editions having been exhausted. A special pamphlet was prepared last winter, which was published in the spring, giving a résumé of the work of this division since the commencement of the work in 1901. In addition several thousand circulars and leaflets have been sent out.

Press Articles.—From time to time articles have been prepared for publication in the western agricultural periodicals, usually supplemented by photographs.

NURSERY WORK.

The following areas were occupied during the growing season of 1908 with the various classes of stock :—

Broad Leaf.

- 19 acres, 1 year old Manitoba maple.
- 11 acres, 2 year old green ash.
- 16 acres, 1 year old green ash.
- 1½ acres, 1 year old American elm.
- 3 acres planted to willow cuttings for propagating stock.
- 1 acre planted to Russian poplar cuttings for propagating stock.

Conifers.

- 1 acre, transplanted native tamarack.
- 2 acres, transplanted evergreen conifers.
- ½ acre conifer seed beds.

55 acres, total under nursery crops.

The season was only a fair one for nursery crops. The seed germinated well and made good progress till July, when we suffered from an extremely dry hot spell; this considerably shortened the growth, the effect being more especially noticed on the ash. The two year ash are somewhat undersized. During the winter they were entirely bare of snow covering and were consequently affected by this, while the summer was not favourable to a very luxuriant growth. The plants, however, are splendidly rooted.

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We have at present heeled in for distribution this spring the following :—

Manitoba maple.....	1,575,375
Native ash.....	743,000
Cottonwoods.....	256,000
Total.....	2,574,375

This number will be added to by making thousands of cuttings of the willows and Russian poplars.

Last spring over 100,000 willow cuttings were made for distribution.

As usual a portion of our maple seed was sown in the fall of 1907 and the remainder in spring of 1908. The seedlings from the fall sowing are considerably larger than those from the spring sown seed. There is always a possibility with this variety, owing to the rapid germination, for seedlings from fall sown seed to be cut down in an unfavourable spring. For this reason a considerable portion of this variety is always sown in the spring, and as a general rule we recommend that this variety be sown not earlier than the first week in May.

Elm.—This (1908) was an off seed year. With considerable difficulty we secured enough seed to sow $1\frac{1}{2}$ acres. This seed is collected early in June and sown about the third week in that month. As a rule the seedlings make from 4 to 8 inches growth the first season and are left in the nursery for the following season, when they make good plants of from 18 inches to 2 feet in height.

Birch.—We have grown small quantities of this variety (native white birch) almost every year, but owing to the difficulty of obtaining seed and the comparatively great area required in propagating it has not been considered advisable to sow it at all extensively. The seed is very small and light and therefore cannot be covered deeply. We find it necessary to sow in screened beds where the seed germinates readily. When two years old the seedlings should be transplanted to nursery rows for one season in order to develop good roots for the final planting.

Ontario soft maple (Acer Dasycarpum).—Although this variety is not usually considered hardy in the west we have been able to secure seed from trees growing in Manitoba, near Mordeu, on the farm of Mr. A. P. Stevenson. We have several trees on the nursery grown from this seed which are now from six to eight feet high and have shown no sign of freezing back. In 1907 I secured some seed from Mr. Stevenson's trees and have raised some 5,000 seedlings, which came through the winter of 1907 without protection and matured up very well last fall. It is proposed to set out a test plantation with these seedlings as it is quite probable that the strain may prove hardy, at least in the more favourable districts. In this connection I might mention that seed of this same variety was secured from Pennsylvania in 1906, but each year the stock has been frozen back to the ground. The roots, however, have not been killed and last summer vigorous shoots from three to five feet long were sent up. These shoots do not appear to be so badly frozen this year.

Willow.—Three acres were this year planted to cuttings of the voronesh or Russian willow, in order to secure stock for distribution. The willow I consider as one of the most suitable varieties for the prairie, especially for formation of shelter belts. It is a rapid grower and will undoubtedly furnish fair fuel in a comparatively short time. One of the chief features in its favour is its ease of propagation by cuttings; so that any farmer owning a few plants can extend his planting almost indefinitely with no expense for nursery stock.

Russian poplar.—An acre was set out in cuttings of this variety, also for the production of propagating stock.

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Though generally we have not recommended the planting of the Russian poplar it has been found of value in certain districts and under certain soil conditions. Especially in parts of southern Alberta it will prove extremely useful, where the Manitoba maple and the cottonwood do not appear altogether satisfactory.

Cottonwood.—This variety is not grown on the nursery, stock being very cheaply secured from the natural growth along the sand bars in the rivers of North Dakota.

Caragana (Arborescens).—Although this cannot be classed as anything but a shrub it will undoubtedly prove very useful for mixture in planting for South Alberta. For a fast growing hedge and garden shelter it can scarcely be excelled on the prairies. It will attain a height of nearly 12 feet in about 7 years but will not exceed this much in later seasons. Growing bushy as it does from the ground it furnishes excellent shelter and is perfectly hardy anywhere on the prairies. Three acres were sown to caragana in the fall of 1908. The stock, however, will not be ready for distribution till the spring of 1911.

In the fall of 1908, 14 acres were sown to green ash and 6 acres to Manitoba maple. More maple will be sown this spring, but not so large an area as usual owing to a scarcity of seed.

COLLECTION OF SEED.

Maple and Ash.—Owing to an early spring and late spring frosts this was not a seed year for either of these varieties. As we already had on hand a large stock of ash seed we did not run short of this variety. But our supply of maple was very limited. It was impossible to secure seed in any quantity anywhere in Manitoba or Saskatchewan. We were able to get about 300 pounds of last year's crop from Brandon, which, added to a small quantity of our own, will give us enough for about ten acres. This is a considerably less area than we should have, but in future we shall be in a position to make up any deficiency in seedling stock with cuttings of willow and Russian poplar.

Elm.—It was an unfavourable seed year for this variety also though we were able to collect enough seed to plant $1\frac{1}{2}$ acres.

White spruce.—About 35 bushels of cones were collected by the ranger on the Spruce Woods reserve and forwarded here. Something over 30 pounds of seed were extracted.

Jackpine.—About 45 bushels of cones were collected in the Prince Albert region and sent to the nursery for seed. As some of the cones were extremely old the seed did not turn out well. The old cones do not open as readily as the fresher ones and the seed in many cases appears to have decayed. About 22 pounds was extracted.

Lodgepole pine (P. Murryana).—About 40 bushels of this variety was also collected in the Cypress hills south of Maple creek. The cones of this pine seem to be the most difficult of all varieties to open, the older cones especially often remaining closed after being submitted to intense heat. If no cones older than two years could be collected there would not be much difficulty in extracting the seed and getting a fair yield to a bushel of cones, but owing to the habit of the jackpines retaining cones for several years it would be almost impossible to prevent collectors picking by the bushel from gathering a large proportion of old cones. About 29 pounds was extracted.

Pinus Ponderosa.—A small supply was obtained from seed picked in the higher altitudes of the Black hills of North Dakota. It is thought that this may prove a suitable variety for prairie planting.

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Abies Concolor.—A small lot of this seed was also obtained for testing on the nursery.

CONIFERS.

We are gradually working up a stock of evergreen conifers which should be ready for distribution in 1911. The varieties which will be most extensively propagated are native white spruce, native jack and lodgepole pine and Scotch pine. Very little, comparatively, is known as to the suitability of various evergreens for prairie planting, especially under plantation conditions. Evergreens have been planted in most of the settled districts, but usually with only moderate success. The average man gets a spruce or pine, and as it is somewhat of a rarity, he plants it out in the centre of his lawn or in some other equally conspicuous and exposed position. Consequently, as a rule, the poor evergreen has to withstand the most adverse conditions of exposure to wind and sun. The failures resulting from this kind of planting do not indicate that these varieties are not hardy. If only moderate care is taken to have conditions resembling, at least as far as possible, those under which the tree thrives in its natural state, much greater success may be hoped for.

Where evergreens are planted they should be set out close together in large numbers for mutual protection, or should be protected in some manner by broad leaf varieties, shrubs or sunflowers; anything, in fact, that will hold snow in winter and keep the young plants well covered, especially during the first winter.

Though as above stated it is proposed to propagate for distribution only a few of the very hardiest varieties, there are many other conifers likely to prove suitable for prairie planting.

The following is a list of conifers at present on the nursery with the ages of the stocks :—

White Spruce.

- White spruce, 1, 2 and 3 year seedlings up to 8 years old transplanted.
- Colorado spruce, 2 year seedlings up to 10 years old transplanted.
- Sitka spruce, 2 year seedlings.
- Picea ajanensis*, 1 year seedlings.
- Norway spruce, 4 years transplanted.
- Norway spruce (*Septentrionalis*), 1 and 2 year seedlings, 4 years transplanted.
- Scotch pine, 1, 2 and 3 year seedlings up to 6 years transplanted.
- Jackpine, 1, 2 and 3 year seedlings to 4 years transplanted.
- Lodgepole pine, 1, 2 and 3 year seedlings to 4 years transplanted.
- Cembra pine, 3 years transplanted to 6 years transplanted.
- Flexilis* pine, 3 year transplanted.
- Ponderosa pine, 1 year seedlings, 3 years transplanted.
- Norway pine, 3 year seedlings.
- Dwarf mountain pine up to 6 years transplanted.
- Douglas fir to 5 years transplanted.
- Balsam fir to 5 years transplanted.
- Nordman's fir, 1 year seedlings.
- Concolor fir, 3 year transplanted.
- Dwarf juniper up to 6 years transplanted.
- Common red cedar up to 6 years transplanted.
- European larch, 7 years transplanted (9 feet high).
- Siberian larch, 1 year seedlings to 4 years transplanted.
- Native larch or tamarack, 1 year seedlings to trees 10 feet high.
- Larix leptolepis*, 2 year seedlings.

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Trials are also being made with a small collection of conifers, the seed of which was obtained in Japan, also with seed procured from Northern Russia and Finland.

At present date there are over 10,000 square feet of shaded seed beds on the nursery containing fall sown seed and 1, 2 and 3 year seedlings, 1 acre of transplants of Scotch pine and spruce set in 1903, and 1 acre of swamp pulled tamarack set in the same year.

Considering the somewhat unfavourable conditions for evergreen propagation which at present prevail on the nursery, owing to exposure, newness of soil, &c., the results obtained are very encouraging, and indicate that with adequate shelter the propagation of such varieties as spruce and pine may be very successfully carried on in this country.

The Native larch or tamarack has again made especially good growth in the plantations. It seems to be a very easy variety to transplant, is very hardy, and a rapid grower.

The *European larch* appears hardy and makes very strong growth, but owing to the very early date at which it buds out in the spring the time for transplanting is short. Transplanting does not seem successful after the buds have opened.

Siberian larch.—This variety matures up earlier in the fall than the European, losing its leaves eight to ten days sooner. The native larch is bare of leaves several days earlier than the Siberian. In this climate varieties maturing early in the season are the most desirable. It is probable then that the Siberian form of the larch will prove more suitable for our conditions than the common European.

PERMANENT PLANTATIONS.

We have now about 40 acres under permanent plantations, 25 acres being set out last spring (1903). These permanent or test plantations will be added to each season as new land can be prepared for planting, the object being to ascertain the best varieties and best mixtures for prairie planting for the production of fuel, fencing and other material.

The following is a list of permanent planting to date :—

Permanent Plantations.

In 1904—

	Feet.
Main belt of Manitoba maple, cotton wood and willow. . .	3 x 3
Plantation No 1, tamarack and white spruce.	3 x 3

In 1905—

No. III—Tamarack, Scotch pine and White spruce.	3 x 4
No. XI—European larch.	3 x 3
No. XII—Maple, cottonwood, elm, European larch, tamarack, white birch.	4 x 4
No. XIII—Scotch pine and white spruce under large maples and cottonwoods.	4 x 4

In 1906—

No. II—Scotch pine and white spruce, alternate rows. . .	3 x 4
No. IV—Scotch pine (French stock).	3 x 4
No. V—Scotch pine (stock grown at Indian Head). . .	3 x 4
No. VI—Cottonwood.	3 x 4
No. VII—Cottonwood and Manitoba maple, alternate rows	3 x 4
No. VIII—Manitoba maple and white birch, alternate rows.	3 x 4
No. IX—American e'm and green ash, alternate rows. .	3 x 3
No. X—Russian poplar.	4 x 4

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In 1908—

No. XIV—White willow....	3	x	3
No. XV—Golden willow..	3	x	3
No. XVI—Acute leaf willow....	3	x	3
No. VII—European larch and green ash, alternate rows..	3½	x	4
No. XVIII—Tamarack and green ash, alternate rows..	3½	x	4
No. XIX—Tamarack....	3½	x	4
No. XXIII—Tamarack and Manitoba maple, alternate rows	3½	x	4
No. XXII—Scotch pine and green ash....	3½	x	3½
No. XX—Lodgepole pine....	3½	x	3½
No. XI—Lodgepole pine and green ash, alternate rows..	3½	x	3½
No. XXIV—American elm....	3½	x	4
No. XXV—Cottonwood....	3	x	3
No. XXVI—Cottonwood, birch, tamarack, ash, maple and willow....	4	x	4

These plantations vary in size from ½ acre to 3 acres.

Last spring, as above stated, 25 acres were planted; about 5 acres were put in with spades, 14 acres planted directly in plough furrows, and 6 acres with iron dibbles. In all cases the ground was first marked out with cross drills to ensure the rows being straight and even both ways for horse cultivation.

	Per acre.
Planting with spades the cost averaged....	\$ 9 99
Planting with dibbles the cost averaged..	6 52
Planting with plough the cost averaged....	6 33

Dibbles can only be used successfully for cuttings, as a rule, one and two year seedlings have too well developed a root system.

In planting in plough furrows we use a two-horse walking plough. The rows are five chains long. In order to keep the plough team busy a gang of five men and a boy, besides teamster are necessary. The boy sets the stakes for the plough furrows and the five men plant certain sections of the rows as soon as the plough passes. The furrow is opened up as deeply as possible running the plough twice in each furrow, throwing soil both ways. The planters only set the tree and tramp in enough soil to hold it firmly, the filling in is done by another man with a single horse cultivator.

When spade planting, the planters work in pairs, one man making the hole, the other carrying the seedlings, setting them and firmly tramping the soil. This is the method we use in planting the evergreens, as the stock being small would not be evenly covered if planted in furrows.

Plantations of maple, cottonwood, and others of the fast growing varieties, require cultivation and hoeing for at least three seasons. We find that the average annual cost per acre for hoeing is from \$4.70 on new clean land to \$9 on older land.

Horse cultivation averages \$1.12 an acre.

These prices are arrived at from the time spent on the work and the actual wages paid on the nursery. On the average farm a few acres of trees could easily be cared for without in any way materially increasing the usual expenses, as the actual time employed is very little and special help would not be hired for this purpose.

The following table showing the percentage by actual count of dead trees in the 1908 plantations may be of interest. The count was made in September.

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Permanent Plantations—1908 Planting.

Variety	No. of trees planted.	Per cent died.
Willows (cuttings).....	9,832	46.4
European larch.....	2,406	22.02
Tamarack.....	12,015	2.1
Ash.....	13,308	5.4
Lodgepole pine.....	5,745	9.8
Scotch pine.....	3,244	4.3
Manitoba maple.....	3,003	3.7
Elm.....	5,381	1.6
Cottonwood.....	6,906	17.6

The soil was fresh backsetting, ploughed a third time. The willow cuttings were damaged a great deal by gophers, which cut off the young shoots as soon as they appeared above the ground. The cuttings were also set early in spring, while the ground was still very cold, some three weeks before the general planting was commenced. Had the cuttings been set later in the season it is not likely that there would have been the same percentage of failures.

It is interesting to note the difference in the death rate between the European larch and native tamarack, the latter being only 2.1 per cent.

An additional 12 acres has been prepared for planting this spring (1909).

Exhibition Plots.

Last spring several small exhibition plots were set out; these contain 100 trees each, set 4 x 4 feet. The plots are arranged side by side in order that one variety may be easily compared with another. These plots will be added to each year till a complete collection of all hardy varieties is obtained. The following plots were planted:—

Scotch pine.	Siberian larch.
Cembra pine.	Colorado spruce.
Dwarf mountain pine.	Native white spruce.
Lodgepole pine.	Canada spruce (from Black hills, N.D.).
Jackpine.	Balsam fir.
Tamarack.	Cedar.
European larch.	White birch.

Ornamental Grounds and Shrubbery.

The shrub borders have made splendid growth and now add greatly to the attractiveness of the nursery. Many of the varieties are now coming into bloom. The following are the varieties used most extensively, all of which have proved absolutely hardy during the past four seasons:—

Caragana arborescens.	Spirea Van Houtii.
Caragana pygmaea.	Spirea Billardii.
Flowering currant.	Spirea arguta.
Red twigged dogwood.	Spirea opulifolia.
Tartarian honeysuckle.	Japanese rugosa roses.
Albert Regel's honeysuckle.	Dwarf or trailing juniper.
Lilacs, common, Persian and Joseka's.	Dwarf mountain pine.
Ginnalian maple.	

The Japanese rugosa rose is particularly worthy of notice. It is very hardy, has a most beautiful foliage, blooms profusely over a very long period, and after blooming produces immense hips of a bright scarlet colour which remain on the bushes well on in the winter.

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All our shrubs are planted thickly and are so arranged as to be well covered with snow during winter. At present date, though the adjoining fields are perfectly bare, all the shrub borders are drifted from two to five feet deep. This winter covering is most beneficial to all flowering shrubs and herbaceous perennials.

During the summer the perennial plants gave an especially fine show of bloom, though the latter part of the season was too hot and dry for good success with annuals.

Perennials that may be particularly recommended as being specially hardy are the German iris, perennial larkspur, Iceland poppy, columbines and peonies.

This season a small lawn and some additional shrubbery planting were laid out around the new boarding house.

Ploughing and Farm Work.

Sixty acres of fresh ground was broken up and backset. About 12 acres of this was reploughed very deeply to put it in condition for permanent planting. About 20 acres was summer-fallowed for nursery work and 30 acres ploughed in fall after trees had been dug and put in shape for spring sowing. A supply of feed oats and hay was also harvested.

Buildings and Permanent Improvements.

A small building for the extraction of coniferous seeds was erected in the fall at a cost of about \$500. One end of this building, 20 x 16, is equipped with a hot water heater and fitted up with suitable drawers or trays for drying and opening the cones. The other end, 16 x 18, is for the extraction and cleaning of the seed. During the early part of the winter about 120 bushels of spruce and pine cones was opened here.

Connection with the town waterworks was completed in September. The main pipe leading into town cuts across a portion of the nursery. This was tapped at a convenient point, giving a plentiful supply of splendid water under a very good pressure. This will be particularly beneficial for the growing of young coniferous stock. There is no doubt that with artificial watering the young plants can be brought to a suitable size for permanent planting at least a year sooner than if grown without any such watering.

In conclusion I would say that the results, both at the nursery and at the outside plantations, are most gratifying. The co-operative planting system is becoming well known and extremely popular through the prairie country. It is conceded on every hand that the work will prove of immense value to the country and should be developed to even greater proportions.

Your obedient servant,

NORMAN M. ROSS.

APPENDIX No. 8.

REPORT OF ARCHIBALD MITCHELL.

DEPARTMENT OF THE INTERIOR,

FORESTRY BRANCH,

NURSERY STATION,

INDIAN HEAD, SASKATCHEWAN, February 18, 1909.

R. H. CAMPBELL, Esq.,
Superintendent of Forestry,
Ottawa, Ont.

SIR.—I have the honour to submit herewith the following brief report of my work as assistant in the Tree Planting Division of the Forestry Branch.

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I joined the Forestry Branch on March 1, 1908, and on that date left Edmonton to go to Indian Head to take up my duties there.

A short time before I had been requested by Mr. Bryan, the Principal of the Provincial Normal School at Calgary, to give the students there an address on tree planting, and on my way through Calgary I stopped off and did so. After the meeting was over Mr. Bryan asked me to give his students a similar lecture, any time I happened to be in Calgary during each session of the school, and, I understand, supplemented and confirmed this request by correspondence with yourself.

The idea of giving the young teachers of Alberta some idea of prairie planting and the general principles of forestry is, I understand, the outcome of a requirement in their curriculum, and which I think reflects great credit on the Educational Department of Alberta. They thus recognize the importance of some knowledge of forestry throughout the West, and are taking what steps they can, through the public schools, to bring that knowledge to those whom it will most benefit. I regret to say that I was not able to be in Calgary during the last session of the Normal School, as my inspection work kept me in Saskatchewan during the summer and fall, but I hope in the future to be able to comply with Mr. Bryan's request as far as possible.

After assisting, at Indian Head, with the packing of the trees for distribution and the other work going forward in the nursery, on May 12 I went down to the Spruce Woods reserve east of Brandon and collected seedling tamarack from the swamps there and forwarded them to the nursery at Indian Head. While in the reserve I also planted 10,000 young Scotch pine seedlings in the fall places of the forestry experimental plots which have been planted there in recent years. These plots have been quite successful and the plants are beginning to show well above the grass in the older plots.

The collection of elm seed was my next work, and this was done in the Qu'Appelle valley about 24 miles north of Indian Head. Seed was very scarce and several heavy gales and thunder showers at picking time made it still less, so that only a small quantity was obtainable.

After the seed gathering I went west to Alberta with Mr. J. N. B. McDonald, one of the new plantation inspectors, to go over a portion of his territory with him and give him some idea of his work. Alberta is my old inspection district and I was able to point out to him the different local conditions prevailing in that province, all of which have to be considered in the successful growing of trees in that part of the country. This took about two weeks, and on my return to Indian Head I immediately went to Manitoba and spent a few days with Mr. A. P. Stevenson and another new inspector, Mr. Jas. Kay, looking over some of the oldest plantations in Manitoba, and getting some idea of planting conditions in that province generally.

The forestry exhibit at Brandon Summer Fair next took up my attention. This Mr. Ross and I thoroughly overhauled, and it was a source of much interest to the visitors at the fair, hundreds of whom visited it. I was in attendance during the five days the exhibition lasted and was able to supply a good deal of information about planting on the prairies, arranging plantations, setting out gardens, and so on, in answer to inquiries.

On my return from Brandon, about July 20, I commenced inspecting plantations and continued until about October 24. The district assigned to me was the northern part of the prairie sections of Saskatchewan, chiefly along the Grand Trunk Pacific and Canadian Northern Railways to the boundaries of Manitoba and Alberta respectively.

The number of parties on my list to be visited was 406 and of these 301 were new applicants. Of the new applicants 150 were prepared to plant, while 151 had made no preparation. Many of the latter are new settlers and, while unable to undertake any

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preparations for planting in 1908, almost invariably requested that their names be carried over for next year's inspection.

Of the 50 per cent of new applicants who had land prepared for planting, only a little over 40. per cent had their proposed plantations arranged in an entirely satisfactory manner, that is, had their strip of prepared land wide enough and large enough for best results, and at a proper distance from their buildings. These are matters about which the farmers, as a rule, have very crude ideas, and there is no doubt that in this connection lies one of the most valuable features of the work of the inspector, for in these cases where the applicant has not made a good arrangement of his proposed plantation, or has not made a start at preparing the land, the inspector is able to go over the ground with him and point out the best arrangement his experience may suggest, and even, as is frequently done, leave a sketch plan for his guidance. It is also worthy of note in this connection that the men from Manitoba, or the older portions of the Western States, usually require little or no help in this direction. They have been through it all before and know the evil of having their buildings crowded closely round by various strips, and, as a result, you find them with wide belts, inclosing wide and long spaces within which there is plenty of room for new buildings, garden, orchard, calf or pig paddocks, and so on.

The trees planted in 1908 were as a rule well planted and cared for, and very few cases of slovenly work were met with. The necessity for thorough preparation and careful cultivation afterwards seems to be becoming quite widely recognized throughout the country, and quite an improvement in this respect is to be found compared with what it was in 1902 when I made my first inspection trip.

The older plantations are doing excellently well and I was able to take a number of photographs of some of them, so that some record of their progress might be available in the office.

It is indeed a pleasure to see some of these plantations now, five or six years old and 12 to 16 feet in height, inclosing the farmers' premises and affording shelter, no matter how the wind may blow. Such plantations are usually quite a landmark in the district and as a rule act as an encouragement and stimulus to other farmers to do likewise.

While in Alberta, in that part of it between about Nanton and Red Deer, I found many of the older plantations and especially the cottonwoods in them, badly damaged by the previous winter's frosts. This was not altogether unexpected, as in 1907 there was a severe freeze about the middle of August in these higher districts, which caught the trees while the leaves were still on and the plants in full vigour of growth. The leaves were badly blackened and consequently the trees were unable to ripen up before winter, with the result that most of them were badly damaged during the cold weather.

The cottonwoods have always been more or less susceptible to frost-hurt in these districts, and it will probably be better to send fewer of them for a few years and try Russian poplar and perhaps the acute-leaved willow instead. Russian poplar, as is well known, has certain disadvantages which do not make it advisable for planting in certain situations, but I think that this case is exceptional.

One of the reasons why the Russian poplar is not to be recommended for general planting is the fact that its roots spread wherever possible into cultivated land adjoining and there send up a multitude of suckers, which, in time, may become very objectionable. In the middle of a good wide belt, however, it should not give so much trouble in this respect.

Another objection to the Russian poplar has been found in its liability to sunscald and disease, but it would appear that certain varieties of it are not so easily affected in this way as others. It seems that the varieties with spreading branches and thick leaves are more exempt from trouble of this sort than those with upright

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branches and thin leaves. The bark is thicker and the set of the branches is such that they seem to afford a better shade and protection from the sun's rays. In the Porcupine Hills, about 9 miles west of Staveley, at the Oxley ranch, there are other Russian poplars of this wide spreading variety which are about 35 feet high and about 16 years old, and which are quite sound and in good order. West of Saskatoon this summer I also saw a number of Russian poplar plantations seemingly of the same variety which were about 15 years old and about 32 feet high, from 4 to 5 inches in diameter 4 feet up, and remarkably free from disease. The parent tree was also quite sound and it is interesting to note that it was obtained as a cutting from Dr. Saunders, of the Central Experimental Farm, Ottawa, 17 years ago.

From these examples I should judge that the Russian poplar might, with advantage, be introduced into our plantations in the higher altitudes where the cottonwood is inclined to be tender. Some one of the fast growing poplars is desirable as a mixture in the plantations in order to obtain rapid height, growth and shelter, and even although the Russian poplar might not be a very long lived tree, if judiciously mixed, it could be cut out when its usefulness as a rapid shelter was past, without detriment to the plantation.

I may mention that Mr. Ross takes a similar view of this question and that arrangements are being made to send a number of Russian poplar cuttings into these higher districts in spring.

The acute-leaved willow is also proving pretty hardy in these districts, and at the Oxley ranch there is a specimen about 30 feet high and 16 years of age.

After returning to Indian Head from my inspection tour I was engaged for a short time in the nursery and latterly in the office revising the work of the summer and arranging in detail the quantities of trees to be shipped in spring and preparing plans and other office work. On February 1 I started for Alberta to carry out a month's series of institute meetings.

Perhaps it may not be out of place to mention that, after my being away from any connection with the Forestry Branch for two years, I find on my return to it all over the several districts I have been in this past summer, quite an improvement in the attitude with which the work of prairie planting is viewed by the farmers. Men look at it now with confidence instead of almost suspicion as they were often inclined to do at first, and the community is coming more and more to recognize the value of the assistance rendered them. The need of the trees never was questioned at any time, but there seemed in many cases to be a feeling as if they were afraid of compromising themselves in some way by signing the Tree Planting Agreement. Now, as a rule, the men seem to understand the conditions and frankly and with alacrity accept them, and it is seldom necessary, on the inspector's visit, to explain the agreement so fully in detail as it used to be. They know it already and recognize it as a protection for their plantations and necessary for their success in growing them.

To the men from Ontario and eastern Canada generally, who have been somewhat used to government assistance in agriculture, the tree planting movement, while highly appreciated, is not so striking a thing as it is to the settler from the old country and the continent of Europe. These, coming from the wooded countries, recognize at once the need for trees, and appreciate highly the efforts of the government of Canada in attempting to supply their need, the more so, as such assistance is unknown where they come from.

The new comer from the States has been used to assistance in various directions in his farming operations, and also, in some cases, in tree planting, but he also, nevertheless, seems to value very highly the opportunity he finds in this country for obtaining a quantity of planting material grown in the country, and adapted to its requirements, with instructions as to the disposal of it, free of charge.

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Altogether, it would appear to be becoming well recognized on all hands that the tree planting movement is a very worthy one, and one readily finds, in conversation with the farmer, that nearly every one of them intends to take advantage of it as soon as he finds himself firmly enough established, and able to undertake the work of planting.

I am, sir, your obedient servant,

ARCH. MITCHELL.

APPENDIX No. 9.

REPORT OF A. P. STEVENSON.

DEPARTMENT OF THE INTERIOR,

FORESTRY BRANCH,

DUNSTAN, MANITOBA, NURSERY STATION, February 26, 1909.

R. H. CAMPBELL, Esq.,
Superintendent of Forestry,
Ottawa, Ont.

SIR,—I have the honour to submit the following brief report on the work done by me as tree planting inspector in connection with the work carried on in this province (Manitoba) by the Forestry Branch of the Department of the Interior, during the summer of 1908.

I began inspection work on the 15th of June. It was soon noticed that the previous winter had done some damage to the young growth of the previous year. The evidence of this injury was not so great in the Red River valley, but in the western part of the province it was noticed and the previous year's growth had got considerably killed back. The cottonwood and Manitoba maple were the chief sufferers. The ash, elm and Russian willow came out all right.

I might note that the winter of 1907-8 was a very trying one on our own grounds, the injury from what is known as winter killing being the greatest in many years. This was especially noticeable among the young trees that had made strong, vigorous growth during the previous summer. I believe the trouble was caused by a very late spring followed by a summer of excessive growth. An early frost caught the young immature growth full of sap, with the above mentioned result. This is the only explanation I can give; it was not excessive cold, as the winter of 1907-8 was a comparatively mild one.

I do not anticipate any unfavourable results this spring, the young growth ripening up its wood well in the fall, the soil also being full of moisture at the close of the season, which is of great assistance to trees of all kinds wintering well in this country.

On June 30, Mr. Arch. Mitchell, assistant in Tree Planting Division, Indian Head, arrived in Morden to examine some of the plantations in that locality. He was accompanied by Mr. Kay, of the Forest Nursery Staff, who was later to take part in the inspection of tree plantations. Various plantations were examined in the Morden, Dunstan and Clegg districts. A day was also spent in the Baldur district. On leaving for Indian Head on July 3rd Mr. Mitchell expressed himself as being highly pleased with the growth and appearance the young plantations had made in so few years.

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Mr. Kay accompanied me on inspection work until July 11, when he left to take up inspection work on the main line of the Canadian Pacific Railway and its northern tributaries, including the Glenboro' branch from St. Claude to Sinclair. The district covered by myself was the Red River valley and westward to the western boundary of the province, taking in all the country south of the Glenboro' branch of the Canadian Pacific Railway and also the main line of the Canadian Northern Railway from Winnipeg northwest to Roblin.

The spring of 1908 was a very favourable one for the growth of all tree and plant material of any variety, the rainfall being well up to the average. The percentage of young trees growing that were set out in the spring of 1908 is fully 85 per cent. The older trees also, that had lost some of their last year's wood, quickly recovered from their slight setback, the vigorous growth made being good evidence that their vitality was not in any way weakened.

About the beginning of July the weather set in dry and very hot, the drought lasting till after harvest, but little or no damage was noticed among the young plantations, the trees having a good start and being well established before the dry weather set in. This, together with the thorough preparation of the land before planting, made all the difference between success and failure; for without doubt, had the land not been thoroughly prepared previous to planting, few trees would have survived through the dry heated term that was experienced in southern Manitoba.

It is with pleasure I again note the continued good behaviour of the ash tree and its growing popularity with the farmers.

The Russian willow is being much sought after. Inquiries for this hardy, quick-growing tree are very much on the increase, its general good behaviour under almost all conditions being the cause. One year old rooted cuttings only, if possible, should be sent out to planters.

A few of the first farmers to take advantage of the government co-operative scheme to secure a shelter belt are now turning their attention to the growing of a wood lot for the purpose of raising their own fuel. They find that the work of attending to a block of an acre or two of trees is not such a difficult undertaking as they anticipated when the land is clear of weeds to begin with, and as a horse and cultivator can be used both ways to advantage very little hoeing is required.

In June a visit was paid to the Forest Nursery Station at Indian Head. To the man in the street it is difficult to realize that only four years ago this place was a piece of bare, raw prairie. The transformation that trees, rightly placed, can give to a piece of bare prairie is here realized. It is a great object lesson, and the doubting Thomas goes home strengthened and encouraged to plant trees, convinced that no ideal home can be had without them.

The valuable tests being made with the various kinds of coniferous trees in order to find out their adaptability for prairie planting were also noted. This is a line of work of which practically nothing is known at the present time. The results of these tests will in a few years be of great value to the people of the west. The demand for information on this subject is yearly on the increase, and without doubt it is the desire and ambition of all tree planters to grow successfully a few evergreen trees.

Your obedient servant,

A. P. STEVENSON.

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APPENDIX No. 10.

REPORT OF ANGUS MACKINTOSH.

DEPARTMENT OF THE INTERIOR,
FORESTRY BRANCH,

HEADLANDS, NURSERY STATION, SASKATCHEWAN, December 11, 1908.

R. H. CAMPBELL, Esq.,
Superintendent of Forestry,
Ottawa, Ont.

SIR,—I beg to send you herewith a brief report upon the tree planting inspection work with which you entrusted me this year (1908).

I began work on the 15th June at Lipton, and from there zigzagged the country as far as Lanigan. Then turning back I worked from Lipton to Kirkella; and after from Lumsden to Saskatoon on the Prince Albert Railway.

I found the plantations that I inspected on the whole in a satisfactory state. There were of course a few exceptions, where the keeping down of weeds and cultivation had been neglected.

The plantations made three or four years ago are now showing up well, the trees in many places are from 10 to 13 feet in height and shading the ground thoroughly. These plantations need no further soil cultivation.

The plantations set out last spring, and the spring before that, are also doing well, and taking them all over the average failures do not exceed 7 per cent.

There is not so much cutting back among the cottonwoods noticeable this year as there was last year. Most of the trees injured last year have now recovered, and have this year made good growth. This year's shoots seem to have matured well, and look as if they would stand the winter unscathed. As I have remarked in previous reports, there is always more cutting back on soils that have been heavily manured than on unmanured ground. I always tell the tree planters not to manure, as the prairie soil is generally rich enough for forest trees without any artificial fattening.

You will notice on my books, some applicants who wish their applications cancelled, and others who did not have their ground properly prepared. That is mainly owing to the bad seasons we have been having lately, and the discouraging effects they have upon homesteaders who, to begin, had very little capital, and are now deeply in debt. Tree-planting is not of much interest to a person who can hardly secure the necessities of life. This year on account of bad times I found more empty shacks in my travels than in previous seasons. Quite a number of applicants, mainly bachelors, were away from home trying to earn a little money. Their neighbours often do not know where they are, and thus long drives at times produce no effects.

I find there is a growing desire among those who have plantations three or four years of age for more ash than maple, and that their first impression regarding ash as a slow grower is getting gradually dispelled. They find that when the other trees close in upon the ash it shoots upward, gives a good account of itself, and keeps pace with its neighbours; also that it does not run so much into straggling branches as the maple, and promises to make more useful timber.

Quite a number of people who with care have made their shelter belts a success, ask from time to time if there is any likelihood of conifers being distributed in the near future.

I think it would be advisable to increase the number of trees granted to those who have shown, by the care they have taken of the first lot sent them, that they are worthy of more; to give them, if they have ground well prepared, from 2,000 to 2,700 as a second grant.

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I this year visited for the first time some places far back from railways, where trees were sent without the ground having been inspected, and I am glad to say that the statements made by the applicants, as to the state and situation of their ground, were in most cases correct, and that the trees have been well planted and well cared for. Those outlying places take up a good deal of the inspector's time, but they should be visited once in two years at least.

Your obedient servant,

ANGUS MACKINTOSH.

APPENDIX No. 11.

REPORT OF JOHN CALDWELL.

VIRDEN, MANITOBA, February 6, 1909.

R. H. CAMPBELL, Esq.,
Superintendent of Forestry,
Ottawa, Ont.

SIR,—I beg to submit to you herewith my report for the summer of 1908. I began work on June 15, and ended November 30. I had more names than usual on my list, and to finish properly I should have started on June 1.

My territory was the Canadian Pacific Railway main line from the Manitoba boundary west to Regina, from Regina back east to Manitoba on the Arcola line, the Reston and Wolseley line, and the Canadian Northern Railway from the Manitoba boundary to Regina.

During my first two or three years' work among the farmers I found considerable prejudice, partly political, and helped on by tree agents who would like the farmers to believe that signing the agreement presented was almost like placing a mortgage on the farm.

This feeling on the part of the farmers had almost entirely disappeared. They realize that the splendid work that is being done is just what is wanted in wide open prairie country where farmers are settling down by thousands, and to live in a home probably not within miles of a tree, is dreariness and desolation. In order to make a home anything near homelike, it is absolutely necessary to plant trees, and to plant a good many.

There are so many rich plantations springing up here and there all over my territory, that it has become a matter of course for the farmer to get his name on the list, and to take government trees as soon as he is ready.

Of course, we are working in a new country where most of the farmers are more or less hard up, and where so many improvements have to be made, and it is sometimes hard for them to do things just as well as they themselves would like, so it is up to the inspectors to impress upon them the importance of having their land well prepared, and to take no more than they can care for properly.

My instructions this season were to give no man more than 1,500 for the first time. I gave quite a few less than that; but once in a while I come across a man who, I feel sure, is quite capable of caring for at least 3,000, and who may be anxious to plant them all at once. In that case I book him for what I think he should have, and make a note to that effect on the margin. However, our motto should be, 'What we do, do it well.'

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We are bound to meet with a few failures or partial failures, and I believe as time goes on when one farmer has a splendid plantation and his neighbour's trees are only middling or worse, then is a good time to become even more strict, as they can see that the growing of a fine grove is entirely in their own hands, and is simply a question of good or bad management.

The stock sent out from the forest nursery at Indian Head is the very best for the purpose, and generally reaches the farmers well packed and in good order. The cottonwood is the only variety which, I believe, has sometimes reached the farmer a little out of condition. There may be a little danger of them being dried or heated on the road up from Dakota, or being tied too tightly when being buried for the winter.

This last winter was a splendid try as to the hardiness of the different varieties. The previous summer being cold and wet, the growth had a very poor chance to mature, which left them in poor shape to stand the winter, and a light snowfall made it worse. The cottonwood suffered by far the worst, most of them being badly frozen back, and a few frozen dead.

The elm, ash, maple, willows and Russian poplar all stood the test well. I noticed a few maple, ash and elm killed, but in each case the cause was shallow planting, which is a fatal mistake. These young trees stand a poor chance of living with half an inch or more of the root above ground.

The cottonwood in Saskatchewan seems to do well, and those that were frozen back made great growth this last summer.

The willow cuttings which have been sent out have done well, and are a splendid mixture in a plantation. Few Russian poplar have been sent out lately, but Mr. Ross is getting quite a stock at the nursery, and I would say to send out some. I would not advise planting many on good land, but where the land is sandy or a gravelly bottom, then Russian poplar is one of the best.

The elm has done only middling. It seems to grow slowly, and is liable to be chewed off by rabbits, but when they once come up to six or eight feet they do better, and in the long run elm and ash should be the best. The ash has given pretty good satisfaction right from the start.

The native maple, as usual, is doing well.

I sent a bunch of Russian red willows to Mr. Ross last spring; that is a fast grower and extremely hardy. It grows well on high, dry land, and on low ground it does better than most of the other varieties.

About eighty-five per cent of the trees in my district are doing well. The demand is growing each year, and is likely to increase pretty fast.

I think it is well to leave most of the names on the list, and to make a special effort to call on the new men and to send a return circular to all we do not see.

A few are talking of planting for fuel and posts, but that will not become general till the farmers are in a better position to give the plantations the necessary care.

Quite a few are asking for evergreens, and when we are in a position to send out a few they will indeed be very acceptable.

I still carry my dibble, and give a good many object lessons, which are always appreciated. Most of the young trees sent out are easily planted with a dibble, and as I find new men imagine it quite a contract to put out even a small plantation. I want to show them what an easy matter it really is.

I think we have reason to be pretty well pleased with our progress so far, but I believe we should be a little more strict as to cultivation both before and after planting, as failure or partial failures can generally be traced to poor cultivation.

Twice during the season I had the pleasure of visiting the nursery at Indian Head, and to spend a day there is a real pleasure. The nursery there is a great credit to our efforts in helping to make the thousands of farm homes in the west.

Your obedient servant,

JOHN CALDWELL.

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APPENDIX No. 12.

REPORT OF WALTER GUITON.

DEPARTMENT OF THE INTERIOR,
FORESTRY BRANCH, NURSERY STATION,
INDIAN HEAD, SASKATCHEWAN, December 26, 1908.

R. H. CAMPBELL, Esq.,
Superintendent of Forestry,
Ottawa, Ont.

SIR,—I have the honour to submit to you my second annual report on tree planting inspection work as carried on through the co-operation of the Forestry Branch, Department of the Interior. The districts assigned to me were:

Main line of the Canadian Pacific Railway, Grand Coulee to Moosejaw.

Soo line, Moosejaw to North Portal,

Estevan line, Estevan to Gainsboro'.

Main line of Canadian Pacific Railway, Moosejaw to Lethbridge.

Crowsnest, Lethbridge to Pincher Creek and Cowley.

Alberta irrigation line, Lethbridge to Cardston.

There were 640 applicants on my books, 317 of whom were new applicants. Of these 210 are to receive trees in the spring (1909), while the other 107 will be visited next year, when they will have had more time to cultivate.

The total number of trees recommended by me this year will be 452,520 to old and new applicants, numbering 415.

On April 1 I commenced work at the Forest Nursery Station, making cuttings, planting and assisting with the usual spring distribution of trees, until the 15th of June, when I left Indian Head to inspect plantations on the main line of the Canadian Pacific Railway from Grand Coulee to Moosejaw, also the Soo line. During the whole of this time I found trees making a splendid growth. The tops of the cottonwoods were badly killed back last year, from too late a growth, largely due in many cases to cultivation being carried on later than the third week in August.

On the Estevan line, where planting has been carried on for a number of years, I found the trees, which are from 10 to 15 feet high, shading the ground sufficiently to keep down the weeds and cultivation no longer necessary.

From Gainsboro' I returned to Moosejaw, continuing my way west towards southern Alberta at Swift Current, where we have a large number of plantations. I found the trees doing very well, also well protected from stock. While there I inspected the land at the Mennonite village, twenty-three miles southeast of the town, where the settlers have prepared a sixteen-acre strip running the full length of the village on the west side. This will be, when completed, the largest solid block of trees set out under the co-operation of the Forestry Branch, which will demonstrate to the settlers the advantage of shelter. Care has been taken by the department that the trees on this strip are at a sufficient distance from the buildings (360 feet) so that in the future the enlarging of the present buildings would not disturb the trees.

The plantations planted around Maple creek are doing remarkably well considering the small amount of rain which fell during the summer, but by following the rules given by the inspectors as regards cultivation which is carried on during the dry spell, thus retaining what moisture there is in the ground, this disadvantage is greatly lessened.

I also visited the Cypress hills, about twenty-three miles south of the town, to pick jackpine cones, Murrayana variety, which were shipped to Mr. Norman M. Ross at Indian Head.

Leaving Maple creek, I continued my way inspecting along the Crowsnest Railway till I reached Lethbridge, where the trees are grown under two systems. The

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trees grown under the irrigation system are doing very well. The best results seem to be when the water is turned off the second week in July, so that the trees may have sufficient time to ripen before the frost comes. A good plan, which has shown good results, is to irrigate the ground the last thing in the fall, so that the ground when frozen may be thoroughly moist, thereby having a tendency to check the trees from budding out too early in the spring.

To cultivate trees we all know that a sufficient amount of time and labour is required to be spent upon them to keep the weeds from growing, which takes the moisture from the trees. The soil should always be kept in a loose state so that evaporation does not become too rapid. In dry weather evaporation is effectively diminished by frequently stirring the soil which forms a loose, dry, protecting covering for the deeper layers.

The country southwest of Lethbridge is known as the Mormon district. Here tree planting has been carried on for the past eight years. The killing back of the cottonwood was not noticeable here on account of splendid growth this year. The willow cuttings given out by the Department would have attained a bigger and stronger growth if the rules had been more closely followed in regard to planting, not leaving so much of the young cutting exposed.

The percentages of trees living, set out this year are: elm 98, ash 95, cottonwood 90, maple 95, willow 90.

The increase in the number of new applicants is encouraging, as it shows the interest taken by the farmers in the planting of the prairies.

I arrived in Indian Head the middle of October, assisted with the heeling in of the trees for spring distribution, after which I went into the office at Indian Head, making plans and assisting in the general routine of office work.

Your obedient servant,

WALTER GUITON,
Tree Planting Inspector.

APPENDIX No. 13.

REPORT OF JAS. KAY.

DEPARTMENT OF THE INTERIOR,
FORESTRY BRANCH, NURSERY STATION,
INDIAN HEAD, SASKATCHEWAN, December 26, 1908.

R. H. CAMPBELL, Esq.,
Superintendent of Forestry,
Ottawa, Ont.

SIR,—I have the honour to submit the following brief report on my work as Inspector of Plantations set out under the co-operative system of the Forestry Branch.

I commenced work at Indian Head about the beginning of April, assisting in the distribution of trees and other nursery work, and left Indian Head at the end of June to commence regular inspection work.

The district assigned to me by Mr. Ross was in the northern parts of Manitoba, viz., Glenboro' branch of the Canadian Pacific Railway from St. Claude to Sinclair, the Yorkton branch up to and around Foam lake, the Miniota, Lenore and Brookdale branches and the main line from Rosser to Kirkella.

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There were 450 applicants to be visited on my list, 115 being new; of these new applicants 92 were promised trees, 23 not receiving trees for various reasons, such as, land not in fit shape to plant trees, being too rough, that is, backsetting not well done, land in grain crops, others having plenty of natural bluff and therefore not requiring trees, &c. In all, 266 applicants were promised trees to the number of 229,100 for the spring of 1909.

With a few exceptions I found the trees set out under the co-operative system making satisfactory progress, the exceptions being due mostly to want of time, help, sickness, or some other unavoidable circumstance.

The following is an approximate percentage of trees living: Ash, 98 per cent; elm, 98 per cent; maple, 95 per cent; cottonwood, 85 per cent; willow, 80 per cent; giving an average of 90 per cent, which I consider very satisfactory.

Many farmers at first are not in favour of ash and elm, owing chiefly to their slower growth, but those that have a larger experience of them prefer to have a good percentage of both ash and elm in the mixture, as they are beginning to realize the fact that these two trees will become useful about the farm later on, and when properly mixed with the maple and cottonwood are quite able to hold their own.

The Manitoba maple and cottonwood are general favourites and have done fairly well in most of the districts I travelled over. They are hardy and give good shelter in a very short time when given proper care and cultivation, both of which are necessary to obtain the best results.

Willows are also giving satisfaction, and when properly planted make a quick, bushy growth and make an excellent hedge for wind or snowbreak, and are also quite hardy.

There were a good many trees damaged by frost last winter (1907) even among the older trees, this being probably due to the late short spring and wet summer, keeping the trees growing late in the fall, with the consequence that the new growth was not properly ripened, therefore was killed back when frost set in, some trees being killed outright, the roots of the latter being probably not so well protected by snow or other covering. The periderm or outer covering on roots is thinner than on stems and consequently the former are less protected, and besides growth is generally active for a longer period on roots, where it frequently continues till well on in winter, so that when frost occurs the tissues are not in the inert condition which assists them to resist cold. Such plants burst their buds in spring, but wither whenever transpiration from the tender young shoots has exhausted the supply of water stored up in the plant.

On the Yorkton branch of the Canadian Pacific Railway, north of Binscarth, the ash were nipped back by a 9th of June frost; the 1908 plants only lost their leaves, but the 1907 growths on older plants were killed back, but afterwards recovered and put on a good growth.

These two examples would tend to show that the condition of vegetation in regard to the season of the year has great influence in the power of a plant to resist frost. It is well known what low temperature a plant can stand during the period of winter rest, whereas in spring after the beginning of vegetative activity, and before it ceases in autumn, it is killed by a few degrees of frost.

There should not be much cutting back by frost this winter, as owing to the dry nature of the summer and fall the trees composing the plantations began to lose their leaves early, thus giving them time to ripen the new wood before severe frost set in.

In some cases the 1907 cottonwoods were disfigured by a rough growth in the twigs, this growth being due to plant lice, viz., vagabond gall (*pemphigus vagabundis*). The galls were not noticeable till they had lost their green colour, turning black in the fall, they were then easily seen. There were a few galls this year, 1908, but not in such quantity as in 1907. Farmers were advised to cut off and burn them while still green, thus destroying the insects inside the galls.

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Pruning seems to be a vexed question with a good many planters, but many of them who have pruned find that it has given them years of extra labour to keep down weeds, and that they would have had better windbreaks and plantations if they had kept their knives off the trees. Pruning the trees of these plantations should be quite unnecessary, as the trees are planted close enough, so that after a few years growth the low branches are shaded, cut off from the light, die and drop off, leaving the stems clean and free from branches. The shade also helps to keep down weeds, and also prevents radiation and consequent evaporation of soil moisture, thus rendering cultivation no longer necessary. Any one can see this for himself in the natural bluffs; the straightest, cleanest and best trees are where they grow thickest.

Pruning is only advisable in the case of ornamental and avenue trees where the lower branches would be in the way. When pruning a branch, care should be taken to cut the branches off as close to the main stem as possible, so that the wound will heal over quickly. If snags are left sticking out they decay, the rot spreads into the interior of the tree, making it of little or no value for anything.

In the districts I travelled over the earlier set out plantations are already affording good protection to buildings, and have enabled farmers to lay out nice gardens and lawns in their shelter, in which gardens they can grow quite a large variety of vegetables, flowers and small fruits. Many farmers are also planting out some of the larger fruit trees, and these when carefully selected, give every prospect of success.

The majority of farmers who are planting take quite an interest in the work, which is demonstrated in the time and work and care they have given the trees received from the Forestry Branch.

Your obedient servant,

JAS. KAY.

APPENDIX No. 14.

REPORT OF N. B. McDONALD.

DEPARTMENT OF THE INTERIOR,
FORESTRY BRANCH,

INDIAN HEAD, SASKATCHEWAN, January 12, 1909.

R. H. CAMPBELL, Esq.,

Superintendent of Forestry,
Ottawa, Ont.

SIR,—I have the honour to submit the following report of my work as Tree Planting Inspector in connection with the co-operative tree planting of the Forestry Branch. The district assigned to me was in Alberta, the country along the Canadian Northern line from Islay to Edmonton, the Canadian Pacific Railway line from Edmonton to Calgary, including both Wetaskiwin and Lacombe branches, the Calgary-Macleod line as far south as Granum, and the main line from Cochrane to Medicine Hat.

The number of places to visit on my list was 568. To 261 of these trees will be sent, 220 were new applicants, of whom 130 receive trees next spring.

After spending two months and a half in the nursery station at Indian Head assisting with the distribution of trees, spring planting and other work, I started out on inspection work on June 15 via Calgary and visited first the district round Airdrie, Crossfield and Wetaskiwin to note the results at different elevations of some of the older plantations and to see how the cottonwoods had stood last winter.

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The plantations along the Canadian Northern line had not been inspected before, and it was evident that many of the people did not understand the amount of cultivation necessary as a preparation for tree planting, as about fifty per cent of the new applicants had to be deferred for a year, and much of the ground planted in 1908 would have been better for another year's cultivation. In this newly settled country I found a potato crop usually a much better preparation for planting than summer-fallow, as the farmer must have his potatoes anyway and generally gives them good cultivation; while the land to be summer-fallowed is often allowed to stand in the press of work till late in the summer, when the growth of grass and weeds is so great that the main object of summer-fallow, the conservation of the moisture, is entirely defeated.

Conditions were much better in the districts along both the Wetaskiwin and Lacombe branches of the Canadian Pacific Railway. The country here is open and the want of native timber is felt very much. The few bluffs that have escaped the fires are being rapidly cut out, and I even heard of cases where people came twenty miles to cut poles at night on other peoples' farms; so that the owners in self-defence had finally to cut what was left that they might have a little for their own use. The plantations out in these districts are doing well, and as people realize this and their material conditions improve, I have no doubt that there will be a great increase in the demand for trees to plant.

From about Red Deer south, as far as Staveley, and east to about range 25, west of the 4th meridian, I was sorry to find many of the plantations not so satisfactory, having been badly damaged by the frosts of last and preceding winters; the cottonwood, indeed, may be said to be a complete failure. This district is higher than the rest of the country and on this account seems to be subject to occasional early frosts in the fall, and the soil being generally of a rich black loam, the growth seems to be carried on so late that the new wood is not ripe when the frost comes, and more or less damage is the result. This seems to be particularly true of the cottonwood, though in many of the plantations it must be said that the elm, ash and maple have also suffered badly. This season, however, has been more favourable, the wood being fairly well ripened before the first frost and like'y to stand the winter.

Russian poplar and native trees, such as the balm of gilead, balsam and spruce, do well in this district, but few of the people are within reach of the native plants and those who are frequently lift and plant them badly, the roots often being allowed to dry out on the journey from the bush to the farm, and many of the trees never make a start after being planted.

From about Staveley, south and east, all the trees, including cottonwood, are doing well and making good growth.

In the Gleichen and Medicine Hat districts conditions are very favourable. The trees are growing rapidly and ripening early where the soil is lighter.

With a good many people the ash is not a favourite on account of its slow growth for the first two or three years, but its qualities as a tree suitable for planting on the prairie are being well shown in the older plantations; most of the trees being already as high as the maples and making a yearly growth of from eighteen inches to two feet.

The percentage of deaths in the plantations is small, and this should improve as people understand the planting better. Most of the blanks were amongst the willows, caused no doubt by either loose or shallow planting of the cuttings, and in some cases where the outside row was p'anted too close to the sod the spreading grass roots getting most of the moisture and the plants suffering accordingly.

Your obedient servant,

N. B. McDONALD.

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APPENDIX No. 15.

REPORT OF JAMES LEAMY.

DEPARTMENT OF THE INTERIOR,

DOMINION LANDS OFFICE,

NEW WESTMINSTER, B.C., January 16, 1909.

R. H. CAMPBELL, Esq.,
Superintendent of Forestry,
Ottawa, Ont.

SIR,—I beg to submit the following report in connection with the preservation of the forests from fire and the work done by the forest fire rangers in the employ of the Department of the Interior, for this purpose, in the railway belt in the province of British Columbia, during the season of 1908, which was an excessively dry one and numerous fires occurred, the suppression of which necessitated the employment of a large number of temporary men, and consequently the expenditure of a considerable amount of money, also constant vigilance on the part of the regularly appointed fire rangers in the various districts.

A fire occurred on Timber Berth No. 29 in Yoho park, which, while causing some anxiety, did not do any damage, being subdued by Ranger Buttwell and some men employed under him. This fire was caused by a survey party who were engaged in surveying this berth.

In Mr. Fisher's district, which extends up the Beaver river, and from Donald to Surprise rapids, on the north boundary of the railway belt, a fire occurred which was supposed to have been caused by lightning, there being no person in that neighbourhood; no damage, however, was done thereby.

La Mr. Ashdown's beat, extending along the Columbia river on both sides from the south boundary of the Railway Belt north to Donald, a number of small fires occurred, and some money was expended in fighting them, but no timber was lost.

A fierce fire raged on provincial land in this vicinity for some time, but did not reach the railway belt, owing to the watchfulness of Ranger Ashdown.

Numerous small fires started along the line of the Canadian Pacific Railway between Glacier and Revelstoke and were attended to by Ranger Kennedy. Up the Loop, near Glacier, a bad fire occurred and did considerable damage by burning a snow-shed on the Loop and extending across the mountain near to the Glacier hotel; a large number of men in the employ of the Canadian Pacific Railway, working under the direction of Ranger Kennedy, succeeded in preventing this fire from doing any further damage than as before mentioned.

Along the branch of the Canadian Pacific Railway running from Revelstoke to Arrowhead a number of small fires occurred, being chiefly caused by sparks from locomotives and by settlers clearing land, but were promptly looked after by the Rangers, Messrs. McRae and Morris, also by the Canadian Pacific Railway sectionmen, therefore no damage was done by them; they principally occurred in old logging works and other debris left from clearing the line of railway.

Through the valley of the Eagle Pass river several large fires occurred, notably one on Limit No. 363, held under license by the Eagle River Lumber Company; this fire it is claimed was ignited by sparks from a logging engine operated by the licensees, and burned over an area of $1\frac{1}{2}$ square miles, which had, however, been logged off by the company some years ago; it destroyed two logging camps belonging to the company and some logs on skid-ways amounting to 50,000 feet board measure.

The only other fire that caused any trouble in this valley was one which started about one mile south of Malakwa on the Canadian Pacific Railway line. It was attended to by Ranger Lidstone, who got it under control and prevented it from doing damage.

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The largest and most destructive fire that took place in the Railway Belt in British Columbia occurred in the Shuswap Lake district, in the vicinity of Carlin and White lake; it burned over an area of 2 square miles, partly in a logged out section, on Limit No. 239, under license to the Columbia River Lumber Co.; it is calculated that at least six million feet has been affected by this fire and unless logged out within the next two years, will be lost. This fire is supposed to have been partly caused by sparks from a locomotive operated by the Columbia River Lumber Company in hauling lumber from their Carlin mill to the main line of the Canadian Pacific Railway in the immediate vicinity of White lake; the fire was also set maliciously by some person, as the Fire Ranger, Mr. Peacock, discovered that the fire was started in some six or seven places, evidently with the intention of burning up that entire district. This fire was looked after by Mr. D. J. McDonald, Assistant Crown Timber Agent, and Mr. W. R. Peacock, fire ranger in charge of this district, and it is due to their combined efforts that the whole of the peninsula situated between the main Shuswap lake on the north and the Salmon Arm on the south, was not completely burned over and all the timber thereon destroyed. A glance at the map of the Shuswap lake will show this; both of the gentlemen were untiring in their efforts, working day and night supervising the work of fighting this fire.

The fire on Manson creek, in Limit No. 240, on the north shore of Shuswap lake, held under license by the Arrow Lake Lumber Company, was caused by squatters clearing and burning brush; this was likewise a very serious fire, affecting about four million feet of good merchantable timber. A bad feature in connection with this fire is that while the men were fighting and quenching the fire it was constantly being reset by malicious persons, who evidently desired to burn up all the timber in that country. I may say that this fire was also overlooked by Messrs. McDonald and Peacock, assisted by the foreman of the Arrow Lake Lumber Company, the company having sent a force of men from Kamloops to look after it.

Another fire, of no consequence, took place on Limit No. 242, on the north shore of the Little Shuswap lake. I may add further that several small fires occurred on the Big Shuswap lake, which were probably set by Indian campers or others, but they were promptly extinguished by the patrol men stationed along the lake and did no damage.

On the Shuswap and Okanagan branch of the Canadian Pacific Railway small fires occurred in many places but did no damage; one occurred about one mile west of Armstrong on some deeded lands, which was attended to by Mr. Johnstone, Fire Ranger, who succeeded in preventing it from spreading into valuable timber along the Salmon River valley; no loss was occasioned by this fire.

A very large fire took place on Deep creek, which fire was caused by settlers clearing land, and extended over some nine hundred acres of bush; it was looked after by Mr. J. D. McQuire, Fire Ranger, who succeeded in preventing it from extending into the Larch Hill reserve and into Limits Nos. 386 and 402, which would have happened if it had not been properly looked after.

A fire occurred up the Salmon river at Silver creek, which was properly attended to by Mr. J. D. McQuire and assistants; it did no harm, as it ran through timber grass and did not destroy any timber, only requiring constant watching.

In the Skemeekin valley a fire occurred which at one time threatened to destroy the timber on Berths Nos. 428 and 451, but was prevented from doing so by the prompt action of the Ranger, Mr. Peacock.

In China valley a fire started which threatened to destroy timber not yet leased, but nevertheless valuable; this fire was prevented from doing any damage.

In the district covered by Mr. Angus McGillivray, around Ashcroft and along the Nicola valley, several small fires occurred but did not do any damage to standing timber. Along the line of the Canadian Pacific Railway in the vicinity of Hope and Yale some fires started which were attended to by Mr. Teague, whom I engaged to look

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after this district, as it was practically impossible for Mr. Fadden and Mr. Hughes to give proper attention to the large districts in their charge.

On Harrison lake two fires of considerable importance took place, one at Twenty-mile Point on Timber Berth No. 281 started in the month of May; this did no damage but another fire occurred in the same place later in the season, which destroyed about fifty thousand feet board measure of timber. The other fire referred to took place on Timber Berth No. 445, and considerable expense was incurred in fighting it; about sixty thousand feet of saw-logs which were cut and lying in the path of the fire, were destroyed thereby; operations were being conducted on both of these berths at the time the fires took place, and the fires are supposed to have originated from sparks from their logging engines.

In the Cultus Lake district only two fires took place, one of them on a steep mountain side, destroying about 10,000 feet of merchantable timber; the other fire did no damage.

At Abbotsford, in the district covered by Mr. John Ball, a fire of considerable proportions took place, but with the assistance of a number of men Mr. Ball was able to prevent its doing any damage.

At Stave river a fire started on Timber Berth No. 268, under license to the Bark of Hamilton, but operated by Messrs. E. H. Heaps & Company; the cause of this fire is unknown, but with the assistance of a number of men the Rangers, Messrs. Martyn and Gilchrist, were able to prevent its doing very much damage; about two hundred cords of shingle bolts were destroyed by this fire.

Another fire occurred in this district on lands on Timber Berth No. 106, presumably started by a party who was living on land which forms a part of this berth; no damage, however, resulted therefrom.

Along the Coquitlam and Pitt Lake rivers, some small fires occurred, but were promptly attended to by Mr. Marshall, the ranger of this district.

On the North Arm of Burrard Inlet only one fire took place, on a small island on which there was no timber, and I consider that the Ranger, Mr. Jeffrey, must have attended strictly to his duties, this being considered a very dangerous district, owing to the many campers who spend the warm months of the summer in this vicinity.

On the south side of the Fraser river a number of fires took place in the vicinity of Timber Berths Nos. 'B,' 'K,' 'H,' 'R' and 293, but owing to the prompt attention of Messrs. Johnson, Cairns and Jameson, the fire rangers in this district, with the assistance of other men, no timber can be said to have been destroyed.

In the whole Railway Belt, in my opinion, not more than 200,000 feet of merchantable timber was actually destroyed during the season, and I consider this small loss is due to the faithfulness and efficiency of the various fire rangers, who were untiring in their efforts, and who have at all times shown a willingness to perform their duties.

Your obedient servant,

JAMES LEAMY,
Crown Timber Agent.

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APPENDIX No. 16.

REPORT OF W. R. McLEOD, CHIEF FOREST FIRE RANGER.

DEPARTMENT OF THE INTERIOR,

DOMINION LANDS AND CROWN TIMBER OFFICE,

PRINCE ALBERT, SASKATCHEWAN, Nov. 19, 1908.

R. H. CAMPBELL, Esq.,
Superintendent of Forestry,
Ottawa, Ont.

SIR.—Attached herewith you will please find report filled in as requested in yours of the 5th instant.

In further reference to this report I may add that we have had a lot of fires to contend with during the months of May and June principally caused through carelessness on the part of travellers and hunters, in leaving camp fires and lighting pipes, as the grass was very dry and did not require a big spark to start burning; however, with the number of fires I consider that the service was very good and saved many times the amount of expense incurred in checking the fires.

We had two bad fires to contend with, viz., the Shrimp lake fire and another near Mistatim on the Canadian Northern Railway branch. These were practically the only fires where any great assistance was required and any amount of extra expense was incurred.

The last mentioned fire at Mistatim must have been caused by lightning, as there was no person near the starting point.

I believe great assistance could be had from the provincial government if they enforced their laws respecting prairie fires, as I understand all officials of the provincial government are fire guardians, but they will let the prairie fires run unnoticed, and nearly all our fires in timber land come from the prairie.

I believe I am safe in saying that the only damage caused in this district has been to second growth pine, and the total amount damaged would not exceed 1,800 acres. Of course, all the second growth pine was not damaged in this above mentioned radius.

Our timber land is broken with poplar bluffs, and these bluffs assist us greatly in fighting fires, as the fire will not run so fast in the poplar as in spruce and pine.

The system we have found most satisfactory in fighting fires is to work at night when the air is heavy and moist, and dig a trench in suitable places where the fire has too far to jump so as to make it a ground fire. The ordinary garden hoe and wet sacks where water can be had we find to be the most effective.

Your obedient servant,

W. R. McLEOD,

Chief Forest Fire Ranger.

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APPENDIX No. 17.

REPORT OF INSPECTOR W. CONROY.

DEPARTMENT OF INDIAN AFFAIRS,

OTTAWA, March 31, 1909.

R. H. CAMPBELL, Esq.,
Superintendent of Forestry,
Ottawa.

SIR,—In compliance with your request I beg to report upon the work done by the fire guardians in northern Alberta for the past year. I might be permitted to state that the work done by them in forest protection has been very satisfactory and a great many fires of long burning were extinguished.

Mr. Samuel Cunningham, who was appointed last spring for Lesser Slave lake, has a very large country to travel over and I was informed by very good authority that he extinguished a number of fires north and south of Lesser Slave lake that had been running for a year or more.

Mr. Duncan McDonald, of Dunvegan, has about 200 miles of the Upper Peace river. He also did a great amount of fire fighting.

I would strongly recommend that the department appoint another guardian from Peace River crossing to Wolverine point, as there is considerable timber fringed along the river which is very valuable. Wolverine point is about 150 miles down the river and would be sufficient for one man to attend to.

If the department would appoint another guardian from Wolverine point to Lachute I think it would be a good thing for the country as the timber is all very valuable. I might say that the Lower Athabaska is well attended to but a man might be appointed for the Upper Athabaska for a hundred miles or more from the mouth of the Little Slave river. Another should be appointed at Grande Prairie, a large tract of country with many bluffs. Big Smoky river would also come within that district.

Your obedient servant,

W. CONROY,
Inspector Treaty 8.

APPENDIX No. 18.

CANADIAN IRRIGATION SURVEYS.

REPORT OF JOHN STEWART, D. L. S., C. E.,

Commissioner and Chief Engineer of Irrigation.

In the spring of 1908 I sent two engineering parties into the field, one in charge of Mr. R. J. Burley, in Saskatchewan, and the other in charge of Mr. P. M. Sauder, in Alberta. Both these men had instructions to make inspections of all ditches authorized, gauge all streams and make surveys of lands to be purchased under the terms of the irrigation system. Under these instructions Mr. Burley made 101 inspections of schemes authorized, 28 inspections of licensed schemes, 36 surveys of lands to be purchased, 11 transit surveys of ditches and made 66 gaugings of streams in his territory and sent in to this office 160 reports. Not having the new meters until late in the season, he was unable to gauge all streams but made a number of weir measurements of small streams before the meters arrived. Mr. Burley had one assistant for the purpose of gauging streams who also helped in making surveys; outside of the other surveys mentioned above he made measurements of earth removed and an estimate of the cost of the Enright and Strong irrigation scheme, in all 14 miles of ditches.

The second party in charge of Mr. Sauder in Alberta made 26 inspections of ditches authorized, 5 inspections for domestic purposes, inspected 19 applications for water, made 2 surveys of Tide lake and Trout creek, and gauged 37 streams, a total number of gaugings of 152, and set 11 gauge rods and erected 3 cable stations for gauging streams, 5 bridge stations and 3 wading stations. He also inspected 5 licensed schemes. Mr. Sauder had two assistants for gauging streams.

In the past season I have personally inspected the Southern Alberta Land Company's property for the exchange of lands, made a survey of the Canadian Pacific Railway Company's reservoir on Thomas Winter's land at Fleming Station, also inspected the Canadian Pacific Railway reservoir at Moosomin Station, the Indian Head waterworks, Enright & Strong's irrigation scheme, and made a survey of Andrew Gordon's and J. W. Imes' irrigation schemes on the Red Deer river. I inspected the Canadian Pacific Railway works at Elkwater lake, inspected some dry lakes southwest of Saskatoon, for Davidson & McRae, of Winnipeg, the Moosejaw waterworks from Snowdy's springs, Maple creek waterworks from Sauder's springs and gauged Milk river at highwater for Dr. King. I also went over the St. Mary lakes and Milk river schemes with Dr. King and the United States officials.

With reference to the inside work of this office during the past year there have been the following number of communications received and sent out, viz.:

Letters received.....	4,235
Letters sent out.....	4,162
Agreements for water received, in triplicate.....	31
Applications for water received, in duplicate.....	43
Plans with applications for water.....	86
Right of way easements.....	38
Agreements for supply and use of water.....	1
Agreements for construction and maintenance.....	3
Transfers of applications.....	4
Transfers of land.....	2
Gauge rod reading (monthly).....	149
Gauge rod (weekly cards).....	567
Right of way plans recorded.....	37
Notice of cancellation of water agreements.....	6

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Notice of transfers of water agreements.... .	33
Applications to cross-road allowances.... .	40
Applications for right of way over Crown lands.... .	31
Notice of applications prepared for publication.... .	39
Number of certificates under section 20 of the Act.... .	52
Number of certificates under section 33 of the Act.... .	26
Number of final licenses recorded, in triplicate.... .	38
Number of reports received from Mr. R. J. Burley.... .	160
Number of reports received from Mr. P. M. Saunderson.... .	52
Number of cards of discharge of streams.... .	207

In a great many of the letters received there were inclosures which had to be recorded in the books of this office and do not show in the number of letters received, and in connection with right of way plans, which are in triplicate, they all have to be compared and checked before registration, which means a lot of work that does not show, also a large amount of blue printing that has to be done and does not show.

APPENDIX No. 19.

REPORT OF RALPH J. BURLEY.

CALGARY, ALBERTA, March 31, 1909.

JOHN STEWART, Esq.,

Commissioner of Irrigation,
Calgary, Alta.

SIR,—I beg to submit the following report upon the work performed by me, and general remarks regarding the progress of irrigation development in the Cypress Hills district during the past season :—

Camp was set up in Maple creek on May 2, and, as soon as possible thereafter the work of inspection and stream gauging was commenced. This work was carried out on practically the same lines as last year, all inspections and surveys in the neighbourhood of Maple creek being made first, then moving the outfit in an easterly and southerly direction to east end, inspecting all schemes on the north side of the hills and then moving west, covering the territory along the south side as far as Eagle Butte and Medicine Hat. Owing to the heavy snowstorm on October 21 and 22, it was impossible to make any inspections north of Tenmile Police Detachment and west of Maple creek, excepting those made in the spring and summer on special trips.

In connection with this inspection work some eleven of the longest ditches were traversed by transit with the idea of carrying on this work in future in such a way that it will not take too much time from the actual work of inspection until the department has in its possession accurate maps of all schemes licensed or authorized. While such work takes considerable time, it will, I think, save much trouble in the future regarding right of way, and many difficulties between the settlers themselves will be avoided if each man's rights are definitely known.

During the past season, progress, in many instances, has been slow owing to various causes, such as a misunderstanding regarding the dipping regulations, and the dry season, causing great difficulty in working the ground and necessitating such long hauls for hay and so unduly prolonging the time necessary to put up sufficient feed for stock.

The question of obtaining hay and fodder for stock is being brought to the attention of the ranchers more forcibly every year as the district becomes more closely

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settled, because the government lands bearing hay are becoming, in many places, very inadequate to supply the demand and it seems that irrigation, used to increase the yield of grass, is the only remedy. The effect of irrigation was strikingly illustrated at Messrs. Enright and Strong's last summer, where, on the upper side of the ditch there was a sparse growth of grass perhaps three inches long and on the irrigated land the bluejoint grass, timothy, alfalfa, &c., were very thick and reached a height of two to three feet. Where such results can be obtained in a dry season like last summer by use of irrigation it must be apparent that it is to the interest of the rancher to complete his works at the earliest possible date.

The conditions of climate and soil in many portions of the Cypress Hills district appear to make it particularly adaptable to irrigation and, although still in its infancy, as regards actual work accomplished, enough has been done to show that under intelligent management the best results may be anticipated. Mr. H. H. Fauquier, near Maple creek, who has been working out his irrigation system for some thirteen years, has demonstrated, year after year, that practically all garden products which can be grown in Ontario can be brought to perfection here, and there are other men who are experimenting along different lines, whose work is beginning to show the possibilities of irrigation in this portion of the semi-arid belt. The long hot days and warm nights appear to produce a condition extremely favourable to growth when the necessary water can be applied.

HYDROGRAPHIC WORK.

This work was carried out in conjunction with the inspections, but as there was practically no snow in the hills during the preceding winter and very little rain during the summer the majority of the creeks went dry during the month of August and part of July. All creeks were measured where possible and eight gauging stations established on some of the more important streams. Several more stations should have been established but owing to the lack of cables and chain gauges and to the fact that most of these other streams were dry last fall it did not appear advisable to expend the time obtaining and transporting such supplies until next season's work commenced, and as there were a great number of inspections pressing for attention this work had to be deferred. My assistant, Mr. Fletcher, started out on a second round of the hills, in October, with instructions to make gaugings of all the streams but was unable to proceed further than Bear creek on account of the heavy snowstorms on the 21st and 22nd.

This work in the Cypress hills is very important, but is rather difficult to carry out owing to the fact that practically all streams over a very large area are in flood at once and rise and fall very rapidly, making necessary the selection of stations where the cross-section is as nearly as possible constant and taking observations for an extended period of years, as it is impossible for any man to cover more than a very small portion of the district during high water.

This work should be greatly extended and carried on systematically over a long period of years as, with the present information on file, it is often very difficult to report on the feasibility of an irrigation scheme, for, although the drainage area may be estimated, practically nothing is known regarding the run-off per square mile, amount of rainfall, slopes of watersheds and amount of timber on watersheds, all of which factors materially affected the flow of water, and this information can only be obtained by careful observation and surveys carried on over a long period. While this work is important in any district it is of special interest in the Cypress hills, where the peculiar conditions of stream flow and the necessity of utilizing all available water for irrigation purposes make it imperative that all available information should be obtained as quickly as possible so that this department will be in a position to advise irrigators as to the best method of conserving and using the water. A condition which is very noticeable on many of the streams is the sinking of the water in the gravel and its reappearance at a point miles down the stream bed, leaving a long stretch dry

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excepting during flood seasons. Unless this condition is pretty thoroughly investigated it may cause trouble regarding the use of water in case an applicant on the dry portion of the stream holds a prior right to one above him and should demand that his amount of water be allowed to pass. Such action would be very unfair, as the water would not reach him in any case and the applicant with the second right would be deprived of the use of the water, which would merely be wasted.

An important factor which must be taken into consideration in the near future is the issuing of licenses against the various sources of supply. As at present carried on it means that when the total flow of the tributaries has been granted no water will be left in the main stream for the applicants along that portion of the stream. A careful definition of the watersheds of the main named creeks and the granting of licenses against the watershed, rather than against the stream would appear to overcome the difficulty, but unless each watershed were very clearly defined it would probably result in considerable confusion.

Another matter which has, so far, attracted no attention but which may be the source of considerable trouble in the future is the granting of licenses against high and flood water. At present licenses are granted for flood water on the same lines as for low water, viz., one second foot for each 150 acres to be irrigated. This gives no chance for reservoiring water during flood periods, and if this amount of water is necessary when the stream flows all the time it would appear that the license should be granted on such a basis as to allow for a steady flow of this amount of water during the irrigation season. This must be arrived at by careful determination of the average duration of high water as well as its amount. There is very little doubt that this matter must be taken up in this district before long on account of the large number of flood schemes being constructed.

Another subject which may have to be considered is the diversion of water from one watershed to another. At the present time I know of only one case where this is being done and this is only a small scheme, but I am informed that it has been a matter for serious consideration in the United States and that it is not allowed in many places. The difficulty appears to be that the seepage from the irrigated land does not return to its own watershed and this water, which otherwise would be of use lower down the creek, is lost to the other residents.

RESERVOIRS.

The question of reservoirs is one which is already attracting a great deal of attention and which, from the nature of the water supply, must be of increasing importance as settlement increases throughout this district. Almost all the creeks flowing north from the Cypress hills empty into lakes and sloughs between the railway and the Sand hills, and as these are too low to be of any practical use for storage purposes from an irrigation standpoint the flood water is wasted. In the season of 1902, Mr. C. H. Ellicott, C.E., made very careful contour surveys of reservoir sites on the following locations:—

Sections 4, 5 and 9, 11, 22, 3 to supply Skull creek,

Sections 4, 8 and 9, 10, 25, 3 to supply Hay creek,

Sections 18, 10, 25, 3 and 3, 10, 26, 3 to supply Maple creek,

Sections 7, 8, 17 and 18, 10, 26, 3 to supply Maple creek.

But no further action was taken regarding them and it is probable that most of the lands included have been otherwise disposed of before the present date. The work of constructing dams, ditches, &c., in these cases was usually too great to be performed by individuals without considerable monetary loss, and although it would be of great benefit to all residents on the creeks no efforts have been made to carry on the work, owing probably to lack of organization amongst the settlers.

Further surveys of this nature would undoubtedly demonstrate the feasibility of storage reservoirs along almost every creek flowing north from the hills, while

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on the south side, there appears to be a very fine natural reservoir in Cypress lake. A careful survey of this lake should be made in the near future to demonstrate its usefulness as a reservoir, taking into consideration the feasibility of diverting water from Battle creek at flood water and using this water to supply both Battle creek and the Frenchman river. It will also, probably, be found when further surveys have been carried out that several small reservoir sites can be obtained to the north and west of this lake, which could be used as feeders, but their utility may be doubtful because of the fact that most of this water must ultimately reach Cypress lake in any case.

Along Middle Fork creek there are several good reservoir sites but there is only one undisposed of, which appears upon casual inspection to be easily constructed. This site is situated in township 5, range 1, west of the 4th meridian and could be made to supply the majority of the irrigation schemes along this creek.

Along Lodge creek I do not know of any suitable site, but there is very little doubt that a survey for this purpose would prove that there are several suitable locations for reservoirs, which will be very necessary for successful irrigation along this creek.

Along the other creeks flowing south from the hills it is doubtful if any large sites could be obtained owing to the rapid fall in the country and it is probable that most of the reservoirs must be constructed by individual irrigators to supply themselves, but a system of surveys would demonstrate to them the possibility of such storage scheme.

Attached hereto is a schedule showing the inspections, surveys and traverses made during the past season.*

Your obedient servant,

RALPH J. BURLEY

* Not printed

APPENDIX No. 20.

REPORT OF P. M. SAUDER.

March 31, 1909.

JOHN STEWART, Esq.,
Commissioner of Irrigation,
Calgary, Alta.

SIR,—I beg to submit the following report of work performed by me during the season of 1908 :—

As almost all the ditches in my district had been inspected during the latter part of the season of 1907, I did not spend much time on inspections, except those in connection with the purchase of land under the irrigation regulations, until after mid-summer.

The measurement of the discharge of streams completed during the previous years served to give a fair approximate idea of the volume of discharge in the different streams in southern Alberta, at the different stages, and it was quite evident in beginning operations this season, that isolated measurements would add little to the information already obtained. Special effort was therefore directed to establishing gauging stations, and in making systematic and continued measurements of the more important streams.

Towards the end of April, a camp was organized at Calgary and Messrs. H. R. Carscallen and H. C. Ritchie engaged as field assistants. Gaugings were first made in the vicinity of Calgary and gauging stations established on the Bow river, Elbow river and Jumpingpound creek. Early in May we moved southward and made discharge measurements of Fish creek, Sheep creek, Highwood river and their branches.

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Bridge stations were established on the north branches of Sheep river, near Millarville, and on the south branch of Sheep river near Black Diamond. Arriving at Nanton on May 30, we were unable to proceed further by trail on account of the heavy rains, so Mr. Carscallen and myself returned to Calgary by train and gauged the Bow, Elbow and Highwood rivers in flood, and afterwards accompanied you to Milk river. In the meantime the camp proceeded to Macleod, where a short delay was necessitated owing to the damage done to the bridge by the floods. I joined camp at Macleod and finding that the floods had changed the gauging station there and so damaged it that reliable results could not be obtained, proceeded to the station on the Belly river, near the Royal Northwest Mounted Police detachment at Big Bend, and found that that station had also been seriously damaged by the floods. The camp was then moved on to Kimbal on the St. Mary river, while Mr. Carscallen and myself made a trip to Milk river and gauged the main stream and the two branches, at points near the junction of the two branches. After gauging St. Mary river, Lee creek and Belly river, we returned to Macleod.

At Cardston we received the new meter and on reaching Macleod I started Mr. Carscallen out with a team, democrat, instruments and one helper to make discharge measurements of the various streams between Macleod and Calgary and in the vicinity of Calgary. I myself proceeded to Brooks station, where I organized a small camp and ran levels from Tilley station to Tide lake to ascertain the elevation of the latter.

In the meantime Mr. Ritchie took charge of the main camp and, moving to the South Fork river, made discharge measurements of the various streams in that locality.

About the middle of July, I again joined the main camp and, after making some inspections in the vicinity of Pincher creek and Cowley, moved camp to Macleod and thence to Willow creek and Nanton. After establishing gauging stations on Muddy-pound creek, Trout creek, Mosquito creek and Willow creek and making some inspections, we moved camp to the Waterton lakes.

A cable station was established on the Waterton river, near the outlet of the Waterton lakes, and some inspections and gauging made in the vicinity of the lakes. Completing the work in the vicinity of the Waterton lakes about the end of August, we again moved camp to Kimbal on the St. Mary river and made gaugings of Lee creek, St. Mary river, North Branch of Milk river and the Alberta Railway and Irrigation Company's canal.

On September 1, having completed the work in the vicinity of Kimbal, Mr. Ritchie again took charge of the camp and proceeded to a point on the Oldman river, north of Cowley, where he erected a cable station and made various gaugings in the vicinity. In the meantime I made a trip down Milk river to Pendant d'Oreille and across to Pakowki lake, and made various inspections in that locality. I again joined camp near Cowley on September 16 and after completing the inspections and gaugings in that locality moved camp to Macleod and thence to Calgary, reaching here on the 30th. Camp was disbanded and the men paid off on October 3.

After leaving camp at Macleod on July 8, Mr. Carscallen made regular discharge measurements at the gauging stations between Calgary and Macleod and in the vicinity of Calgary until the season's work was ended on October 3. In August, he made a trip up the Crowsnest Pass as far as Coleman, where he made a number of isolated measurements on the Crowsnest river and its tributaries. He also made a round of the gauging stations on the Waterton and St. Mary rivers in September.

After making an inspection of the dam erected by the Blindman River Power Company in the outlet of Gull lake early in October, I went to Saskatchewan and made several examinations of applications for water rights and to purchase lands under the irrigation regulations in the vicinity of Gull lake, Swift Current and Herbert.

During the month of November I made a number of inspections in that part of my district lying between Calgary and Claresholm and west of the Calgary and Edmonton Railway.

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The past year has been a very prosperous one in southern Alberta. Crops have been good and the stock has done well. The water used in irrigation has been largely devoted to the growth of fodder crops, hay being the chief consideration in connection with stock raising, in which a large number of the ditch owners are engaged.

Much of the success of future irrigation development will depend upon a correct estimate of the water supply available for irrigation and the permanency of this supply. Frequently applications to purchase lands under the irrigation regulations cannot be dealt with for a considerable time, and, sometimes, not at all, owing to insufficient information as to the water supply. In dealing with schemes which will have to depend entirely on high water and flood stages, it is very important that some definite knowledge of both the quantity of water at those stages and the probable duration of those stages, should be known.

On the information furnished by the government on the water supply, will depend to a very great extent, the development of water-power in Canada. It only takes a few days to locate a good power site and determine the amount of power which can be developed when the water supply is known. Very often the engineer has to spend a year or more making observations of the discharge of a stream before he can make any estimate of the water-power.

While our irrigation laws in general have some very excellent and superior features, the present method of recording licenses is unsatisfactory and if continued will make an adjudication of the water rights on the different streams necessary. This is most undesirable and should, if possible, be avoided. It is evident to any one looking into it, that the granting of a license on a tributary affects the main stream. Following the present practice, water rights will ultimately be granted for the total flow of all the tributaries of certain streams and licensees on the main stream itself will have no protection. Recording the water rights against the catchment basin, or drainage area, rather than against the streams comprising it, would, I think, be the better practice.

Under the present method of granting water rights, the holder of a highwater or flood license does not get the same quantity of water per acre as the holder of a low water license. He is permitted to divert water at the same rate per second as the holder of a low water license, but the period during which he may divert it is only a short one, whereas the holder of a low water license may divert during the whole season. If the holders of high water or flood licenses were permitted to divert water at a higher rate per second, they could store the extra amount of water diverted in reservoirs and use it during low water stages of the stream when they cannot divert from it.

Your obedient servant,

P. M. SAUDER.

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APPENDIX No. 21.

HYDROGRAPHIC SURVEYS.

(Appendix to report of Superintendent of Forestry.)

EXTRACTS FROM A REPORT OF P. M. SAUDER, ON THE HYDROGRAPHIC WORK OF THE UNITED STATES GEOLOGICAL SURVEY AND THE NECESSITY FOR THE ORGANIZATION OF SIMILAR WORK IN CANADA (JANUARY, 1908).

ORGANIZATION AND SCOPE OF WORK.

The hydrographic work of the United States Geological Survey includes the collection of facts concerning and the study of the conditions affecting the behaviour of water from the time it reaches the earth as rain or snow until it joins the oceans or the great navigable rivers. These investigations became a distinct feature of the work of the survey in the fall of 1888, when an instruction camp was established at Embudo, New Mexico. The first specific appropriation for gauging streams was made by the Act of August 18, 1894, which contained an item of \$12,500 'for gauging the streams and determining the water supply of the United States, including the investigation of underground currents and artesian wells in the arid and semi-arid sections.'

Since that time the appropriations have been gradually increased, as shown by the following tables :—

1895.....	\$ 12,500
1896.....	30,000
1897.....	50,000
1898.....	50,000
1899.....	50,000
1900.....	50,000
1901.....	100,000
1902.....	100,000
1903.....	200,000
1904.....	200,000
1905.....	200,000
1906.....	200,000

As a result of the increased appropriations the work has been greatly extended and at the same time it has been more thoroughly systematized by the adoption of standard methods and by grouping the States in districts, in each of which a district hydrographer and a corps of assistants carry on a comprehensive study of the hydrographic resources.

The chief features of the hydrographic work are the collection of data relating to the flow of the surface waters and the study of the conditions affecting this flow. Information is also collected concerning the river profiles, duration and magnitude of floods, water-power, &c., which may be of use in hydrographic studies. This work includes the study of the hydrography of every important river basin in the United States and is of direct value in the commercial and agricultural development of the country.

In order to collect the material from which estimates of daily flow are made, gauging stations are established. The selection of a site for a gauging station and the length of time it is maintained depend largely on the physical features and the needs of each locality. If the water is to be used for power, special effort is made to obtain information concerning the minimum flow ; if water is to be stored, the maximum flow receives special attention. In all sections of the country permanent gauging stations are maintained for general statistical purposes, to show the conditions existing through long periods. They are also used as primary stations, and their records in connection with short series of measurements serve as bases for estimating the flow at other points in the drainage basin.

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Owing to the broad scope of these hydrographic investigations and the length of time they should cover in order that the records may be of greatest value, it is in general impossible for private individuals to collect the necessary data, and as many of the streams traverse more than one state this work does not properly fall within the province of the state authorities. The United States Geological Survey has, therefore, by means of the appropriations of Congress, for several years systematically made records of stream flow, with the view of ultimately determining all the important features governing the flow of the principal streams of the country. In carrying out this plan stations are established on the streams and maintained for a period long enough to show their regimen or general behaviour. When a record that is sufficient for this purpose has been obtained for any stream the work on that stream is discontinued. The order in which the streams are measured is determined by the degree of their importance.

During 1906 the regimen of flow was studied at about 700 stations distributed along the various rivers throughout the United States. In addition to these records data in regard to precipitation, evaporation, water-power and river profiles, were obtained in many sections of the country.

These data have been assembled by drainage areas, and are published in a series of water-supply and irrigation papers, each of which pertains to the surface water resources of a group of adjacent areas. In these papers are embodied not only the data collected in the field, but also the results of computations based on these data, and other information that has a direct bearing on the subject, such as descriptions of basins and the streams draining them, utility of the water resources, &c. The records at most of the stations discussed extend over a series of years.

FIELD METHODS OF MEASURING STREAM FLOW.

Streams may be divided with respect to their physical conditions into three classes: (1) Those with permanent beds; (2) Those with beds which change only during extreme low or high water; (3) Those with constantly shifting beds. In determining the daily flow special methods are necessary for each class. The data upon which these determinations are based and the methods of collecting them are, however, in general the same. * * * * *

VELOCITY METHOD OF CALCULATING STREAM FLOW.

The determination of the quantity of water flowing past a certain section of a stream at a given time is termed a discharge measurement. This quantity is the product of two factors, the mean velocity and the area of the cross-section. The mean velocity is a function of surface slope, wetted perimeter, roughness of bed, and the channel conditions at, above and below the gauging section. The area depends upon the contour of the bed and the fluctuations of the water surface. The principal way of measuring the velocity of a stream is by current meters.

Great care is taken in the selection and equipment of gauging stations for determining discharge by velocity measurements in order that the data may have the required degrees of accuracy. They are located as far as possible where the channel is straight both above and below the gauging station; where there are no cross-currents, backwater or boils; where the bed of the stream is reasonably free from large projections of a permanent character; and where the banks are high and subject to overflow only at flood stages. The station must be so far removed from the effects of tributary streams and of dams or other artificial obstructions that the gauge height shall be an index of the discharge.

Certain permanent or semi-permanent structures usually referred to as equipment are generally pertinent to a gauging station. These are a gauge for determining the fluctuations of the water surface, bench marks to which the datum of the gauge is referred, permanent marks on a bridge or a tagged line indicating the points of measurement, and, where the current is swift, some appliance (generally a secondary cable) to hold the meter in position in the water. As a rule, the stations are located at

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bridges if the channel conditions are satisfactory, as from them the observations can more readily be made and the cost of the equipment is small.

Many kinds of current meters have been constructed; they may, however, be classed in two general types, those in which the wheel is made up of a series of cups, as the Price, and those having a screw propeller wheel, as the Haskell. Each meter has been developed for use under some special condition. In the case of the small Price meter, which has been extensively used by the United States Geological Survey, an attempt has been made to get an instrument which could be used under practically all conditions.

Current meter measurements may be made from a bridge, a cable, a boat or by wading, and gauging stations may be classified in accordance with such use.

In making the measurement an arbitrary number of points are laid off at which the velocity and depth are known as measuring points, and are usually fixed at regular intervals, varying from 2 to 20 feet, depending upon the size and condition of the stream. Perpendiculars dropped from the measuring points divide the gauge section into strips. For each strip or pair of strips the mean velocity, area and discharge are determined independently, so that conditions existing in one part of the stream may not be extended to parts where they do not apply. Three classes of methods of measuring velocity with current meters are in general use—multiple-point, single-point and integration. * * * * *

OFFICE METHODS OF COMPUTING RUN-OFF.

There are two principal methods of determining run-off, depending upon whether or not the bed of the stream is permanent.

For stations on streams with permanent beds, the first step in computing the run-off is the construction of the rating table, which shows the discharge corresponding to any stage of the stream. This rating table is applied to the record of stage to determine the amount of water flowing. The construction of the rating table depends upon the method used in measuring the flow.

For a station at a weir or dam, the basis for the rating table is some standard weir formula. The coefficient to be used in its application depends upon the type of dam and other conditions near its crest. After inserting in the weir formula the measured length of crest and assumed coefficient, the discharge is computed for various heads and the rating table constructed.

The data necessary for the construction of a rating table for a velocity-area station are the results of the discharge measurements, which include the record of stage of the river at the time of measurement, the area of the cross-section, the mean velocity of the current, and the quantity of water flowing. A thorough knowledge of the conditions at and in the vicinity of the station is also necessary.

The construction of the rating table depends upon the following law of flow for open, permanent channels: (1) The discharge will remain constant so long as conditions at or near the gauging stations remain constant; (2) The discharge will be the same whenever the stream is at a given stage if the change of slope due to the rise and fall of the stream be neglected; the discharge is a function of and increases gradually with the stage.

The plotting of results of the various discharge measurements using gauge heights as ordinates, and discharges, mean velocity and area as abscissas, will define curves, which show the discharge, mean velocity and area corresponding to any gauge height. For the development of these curves there should be therefore a sufficient number of discharge measurements to cover the range of the stage of the stream.

As the discharge is the product of two factors, the area and the mean velocity, any change in either factor will produce corresponding change in the discharge. Their curves are therefore constructed in order to study each independently of the other.

The area curve can be definitely determined from accurate soundings extending to the limits of high water. It is always concave toward the horizontal axis or on a straight line, unless the banks of the stream are overhanging.

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The form of the mean velocity curve depends chiefly upon surface slope, the roughness of the bed and the cross-section of the stream. Of these the slope is the principal factor. In accordance with the relative changes of these factors the curves may be either a straight line, convex or concave toward either axis, or a combination of the three. From a careful study of the conditions at any gauging station, the form which the vertical velocity curve will take can be predicted, and it may be extended with reasonable certainty to stages beyond the limits of actual measurements. Its principal use is in connection with the area curve in locating errors in discharge measurements and in constructing the rating table.

The discharge curve is defined primarily by the measurements of discharge, which are studied and weighed in accordance with the local conditions existing at the time of each measurement. The curve may, however, best be located between and beyond the measurements by means of curves of area and mean velocity. The discharge curve under normal conditions is concave toward the horizontal and is generally parabolic in form.

In the preparation of the rating table the discharge for each tenth or half-tenth on the gauge is taken from the curve. The differences between successive discharges are then taken and adjusted according to the law that they shall either be constant or increasing.

The determination of daily discharge of streams with changeable beds is a difficult problem. In case there is a weir or dam available, a condition which seldom exists on streams of this class, the discharge can be determined by its use. In case of velocity-area stations frequent discharge measurements must be made if the determinations of flow are to be other than rough approximations. For stations with beds which shift slowly or are materially changed only during floods, rating tables can be prepared for periods between such changes and satisfactory results obtained with a limited number of measurements, provided that some of them are taken soon after the change occurs. For streams with continually shifting beds, discharge measurements should be made every two or three days and the discharge for intervening days obtained either by interpolation modified by gauge height or by Professor Stouts' method, which has been described in full in the nineteenth annual report of the United States Geological Survey, Part IV., page 323, and in the *Engineering News* of April 21, 1904. This method, or a graphical application of it, is also much used in determining the flow at stations where the bed shifts but slowly.

EXPLANATION AND USE OF TABLES.

For each regular gauging station are given as far as available the following data:—

1. Description of station.
2. List of discharge measurements.
3. Gauge-height table.
4. Rating table.

5. Table of estimated monthly and yearly discharges and run-off, based upon all the facts obtained to date.

The descriptions of stations give such general information about the locality and equipment as would enable the reader to find and use the station, and they also give, as far as possible, a complete history of all the changes that have occurred since the establishment of the station that would be factors in using the data collected.

The discharge measurement table gives the results of the discharge measurements made during the year, including the date, the name of the hydrographer, the gauge height, the area of cross-section, the mean velocity and the discharge in second feet.

The table of daily gauge heights gives the daily fluctuations of the surface of the river as found from the mean of the gauge readings taken each day. The gauge height given in the table represents the elevation of the surface of the water above zero of the gauge. At most stations the gauge is read in the morning and in the evening.

The discharge measurements and gauge heights are the base data from which the other tables are computed. In case of extensive development, it is expected that

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engineers will use these original data in making their calculations, as the computations made by the Survey are based on the data available at the time they are made and should be reviewed and, if necessary, revised when additional data are available.

The rating table gives the discharge in second feet, corresponding to various stages of the river, as given by the gauge heights. It is published to enable engineers to determine the daily discharge in case this information is desired.

The values in the table of monthly discharge are intended to give only a general idea of the conditions of flow at the station, and it is not expected that they will be used for other than preliminary estimates.

DISTRICT HYDROGRAPHER.

As above intimated the work has been systematized by the adoption of standard methods and by grouping the States in districts, in each of which a district hydrographer and a corps of assistants carry on a comprehensive study of the hydrographic resources. Mr. Follansbee, with whom I spent a week, has in his district about seventy gauging stations, scattered over Montana, and the northern part of Wyoming.

His office is located in Helena, where he receives regularly reports from the gauge height observers and his assistant hydrographers and has a record of all the data and facts collected in his district. Recent information is always available at his office even before it appears in the departmental reports.

The gauge height observer is required to mail weekly reports and to enter his observations in a book which he sends in every three months. The book is examined and if satisfactory the amount due the observer is forwarded to him and the book filed for reference.

Mr. Follansbee has two assistant hydrographers, one of whom makes the gaugings in the northern part and the other in the southern part of his district. Each assistant hydrographer makes regular discharge measurements, at each of the gauging stations assigned to him. While making the gauging he checks the gauge height and makes a memorandum of any data which may be useful or interesting to the Hydrographic Survey. As soon as convenient after the gauging has been made, he computes the discharge and forwards a 'Report of Discharge Measurement' to Mr. Follansbee. As soon as the assistant hydrographer has filled his current meter note-book and has made the computations, he sends it to Mr. Follansbee, who checks it and files it for reference.

Mr. Follansbee plots a gauge height-discharge curve, a gauge height-mean velocity curve and a gauge height-area curve for each station, and when an assistant hydrographer sends in his report of a discharge measurement, he plots the data on these curve sheets.

If the points do not plot in the old established curves he at once endeavours to ascertain the cause. When the cross-section changes, the point will not plot on the established curve on the gauge height-area sheet; when the slope changes, the point will not plot on the established curve on the gauge height-mean velocity sheet; and when the current meter is out of order, the point will not plot on the established curve on the gauge height-discharge sheet. When the point does not fall on the established gauge height-discharge curves for several stations and the points on the gauge height-area sheets fall on the established curves, it is evident that the meter is not in order and requires rerating. If it is found that the slope or cross-section at a gauging station has changed, new curves must be plotted for that station.

When making a discharge measurement the hydrographer always checks the gauge-height, and if he finds it has shifted he corrects it and reports the particulars. Mr. Follansbee then corrects the gauge-height observations over the period between the last two discharge measurements, accordingly.

Mr. Follansbee visits as many of the gauging stations himself as he can during the year, inspects the gauge height and equipment and makes a discharge measurement himself. He also spends considerable time in locating and installing new stations.

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During the winter when gauge height observations and discharge measurements are discontinued at many stations he prepares the gauge height tables, rating tables, the tables of monthly and yearly discharges and run-off, and in some cases tables showing discharge and horse-power and the number of days during the year when the same is available. These tables he sends to Washington to be embodied in the annual report of the survey.

Realizing the importance of the hydrographic work in the advancement of the country, the railways are assisting the work to a great extent by the provision of free transportation for each hydrographer and his helper.

I found Mr. Follansbee and the other United States officials whom I met very courteous and obliging, giving me as much information as they could and demonstrating their methods as far as possible. With Mr. Follansbee I visited several gauging stations, and by assisting in making discharge measurements got a good insight into the work.

HYDROGRAPHIC WORK IN ALBERTA AND SASKATCHEWAN.

In accordance with instructions to gauge streams in my district, this work has been done as far as possible, but as the gaugings made give the discharge for one day only the information obtained is not of much value for practical purposes. Gauging stations should be established and discharge measurements made at the different stages of the streams in order that gauge height-discharge, gauge height-mean velocity and gauge height-area curves can be plotted, and rating and discharge tables prepared.

The department's irrigation report for 1902 includes twenty-four diagrams showing rise and fall of certain streams in Alberta and Saskatchewan. These diagrams would be useful if they could be applied to gauge height-discharge curves or to a rating-table, but there is no information given as to the discharge of any of these streams at any given gauge height. They give no information whatever as to the quantity of water in the stream at any given time. The same report gives a statement of the quantity of water available, the quantity recorded and the quantity still available for irrigation purposes for many streams. The information in that statement was obtained from a few miscellaneous discharge measurements and cannot be relied upon. Systematic gaugings must be carried on continuously for a period of eight or ten years in order to get reliable information about any stream.

Hydrographic work has from time to time been taken up in a desultory manner, with the result that the information and data obtained have not been as reliable and beneficial as they should have been had a satisfactory system been commenced and followed up.

In order to carry on the hydrographic survey properly, a special appropriation should be made for it and one man with a small staff should devote all his time to the work. If the irrigation belt were divided into three hydrographic districts, namely: Maple Creek, Macleod and Calgary, with one hydrographer operating in each district, the work could be carried on systematically and thoroughly.

The Maple Creek district would include the following streams:—

Battle creek, east and west branches of Bear creek, Belanger creek, Maple creek, Piapot creek, Ross creek, Skull creek, Seven Persons creek, north and south branches of Swift Current creek, Big Plume creek, Little Plume creek, Miry creek, Boxalder creek, Frenchman river, north fork of Frenchman river, Gap (or Fish) creek, McKay creek, Lodge creek, Middle creek, Fairwell creek, Bridge creek, Cottonwood creek, Hay creek and the South Saskatchewan river.

The Macleod district would include the following streams:—

Beaver creek, Belly river, Boundary creek, Callum creek, Connelly creek, Heath creek, Indian Farm creek, Lee creek, Mahmee creek, Muddypound creek, Milk river, Oldman river, north fork or Oldman river, South Fork river, Crownest river, Pincher creek, St. Mary river, Trout creek, Todd creek, Cow creek, Willow creek and Waterton river.

The Calgary district would include the following streams:—

Bow river, Elbow river, Fish creek, north fork of Fish creek, south fork of Fish creek, Highwood river, Jumpingpound creek, Little Bow river, Mosquito creek, Nanton

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creek, Nose creek, Pine creek, Rosebud river, Sheep river, north fork of Sheep river, south fork of Sheep river, Kananaskis river, Pekisko creek, Stimson creek and Red Deer river.

The chief hydrographer could be stationed at Calgary, and his duties would be similar to those of Mr. Follansbee at Helena. He could see that the gauge height observers reported regularly, plot the returns from his assistants in the gauge height-discharge, gauge height-mean velocity and gauge height-area curves and direct the operations of his assistants.

As the office work would not be very heavy, and the Calgary district is not very large and easy to work, he could do the gauging in that district himself.

During the winter months when most of the gauge-height observations and discharge measurements would be abandoned, rating and discharge tables could be prepared, the data and information compiled to be embodied in the annual report.

Each hydrographer should be provided with a Price Patent Electric Current Meter for ordinary streams, a small Price Acoustic Meter for small streams, an engineer's level, a levelling rod, a compass, a steel tape, a team and democrat. An engineer on hydrographic work only requires one helper and as the country is becoming fairly well settled he does not require a camp. There is no difficulty in getting accommodation for two men almost anywhere. A camp means travelling with a wagon, which of course cannot cover as much ground as a team and democrat. The running expenses of a camp, which include the wages of a cook and a teamster, are greater than the expenses of two men and a team putting up at stopping houses. Then when it is considered that two men without a camp can cover more ground than a party with a camp it is evident that the camp is not economical.

The district hydrographers need not be graduated engineers but capable men with two or three years' experience in engineering and surveying. As the season advanced it is likely the helpers could be dispensed with and during the winter the services of at least one of the district hydrographers could be dispensed with.

As you are aware, the following resolution was submitted and carried at the recent irrigation convention in Calgary:—

‘Whereas the permanency of all irrigation development is dependent upon an accurate knowledge of the location and quantity of water supply available; and,

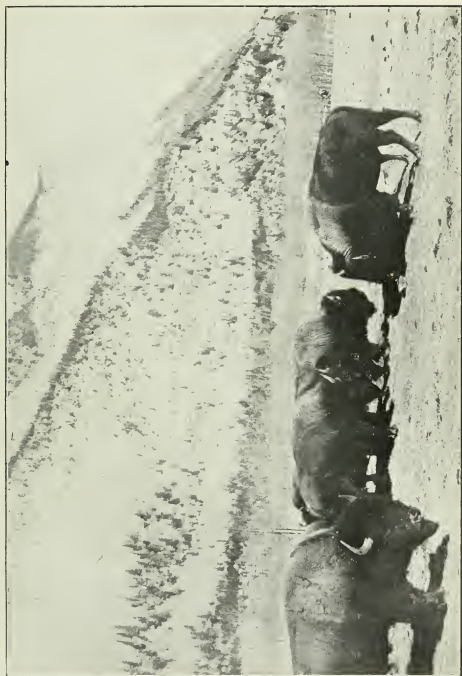
‘Whereas, the matter of the topographical and hydrographical surveys to determine the location and quantity of such water supply and the proper methods of conserving it must be undertaken by the governments administering the law relating to the use of such water;

‘Therefore be it resolved, That this convention, while recognizing the work already done, urges strongly upon the Dominion government and the government of British Columbia the importance of making the necessary appropriations and providing the necessary staff to undertake in an intelligent and systematic manner, the gauging of all streams of water supply and the location and survey of all sites suitable for reservoirs for the storage of water.’

The results of stream measurements would prove many irrigation and power schemes feasible which at present will not be touched on account of lack of information. There would be many more storage schemes for irrigation if the people knew the amount of water going to waste during the flood stages of the streams.

Engineers in the hydrographic survey in the United States claim that many industries have sprung up as a direct result of the information supplied by the hydrographic survey and there are doubtless many power schemes in Canada which will eventually be developed, but at the present time capitalists are slow to invest in such schemes owing to so little information as to the quantity and the permanency of the water supply. This information would also settle any questions arising in connection with water supply and sewage disposal in towns and cities.

The hydrographic work need not be confined to southern Alberta and Saskatchewan but might with advantage be extended over the greater part of Canada. Owing to the extensive surveys for irrigation in British Columbia, information will soon be required there as to the quantity and permanency of the water supply.



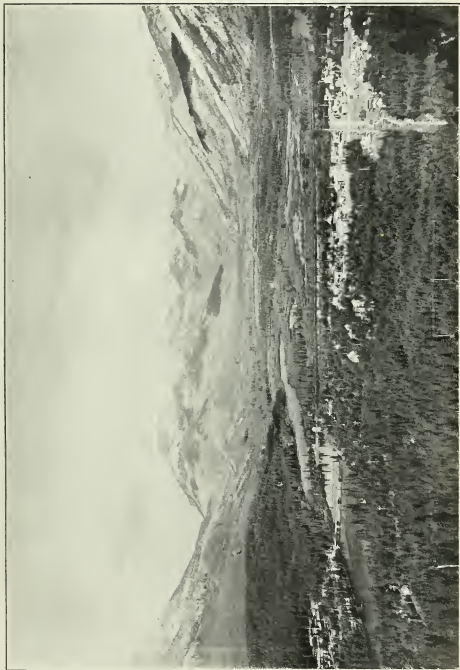
Buffalo at Banff.



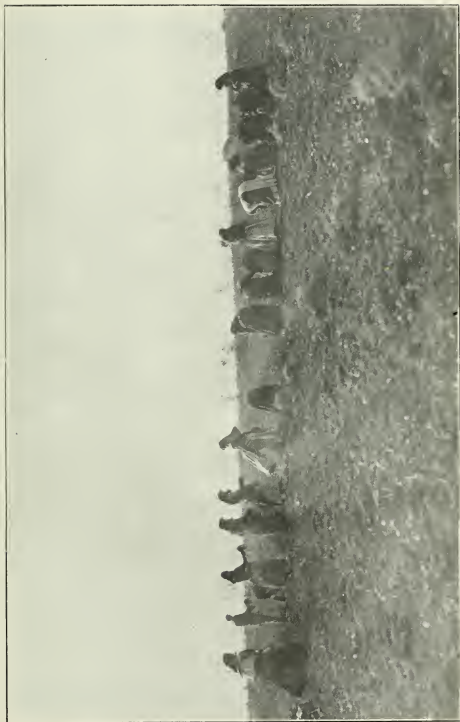
Thirty-five foot cut for Ditch, East End, Sask.



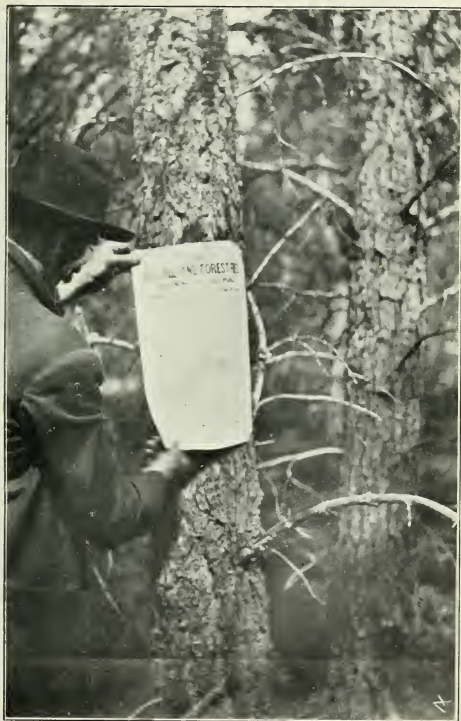
A Forest Fire in British Columbia



Town of Banff from Tunnel Mountain.



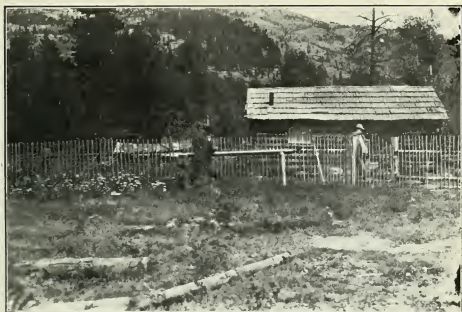
Women pulling and bundling young trees in autumn. Forest Nursery Station, Indian Head, Sask.



Fire Ranger Gladstone putting up fire notice.



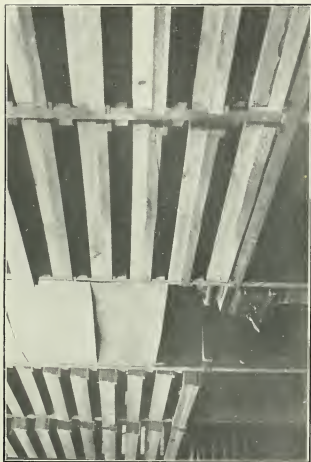
Wheat on Irrigated ground, East End, Sask.—Enright & Strong Irrigation scheme.



Squatter's Cabin on a British Columbia Forest Reserve.



"Heeling in" young trees in autumn, Forest Nursery Station, Indian Head, Sask.



Interior of Seed House, Forest Nursery Station, Indian Head, Sask.



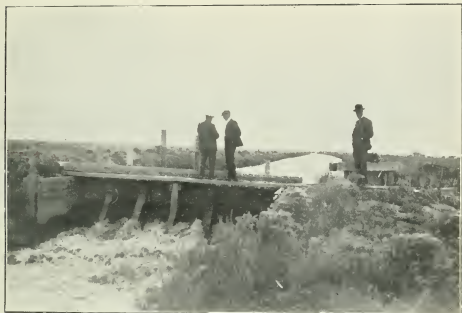
Erecting Fence around Buffalo Park.



Forest Fire in British Columbia.



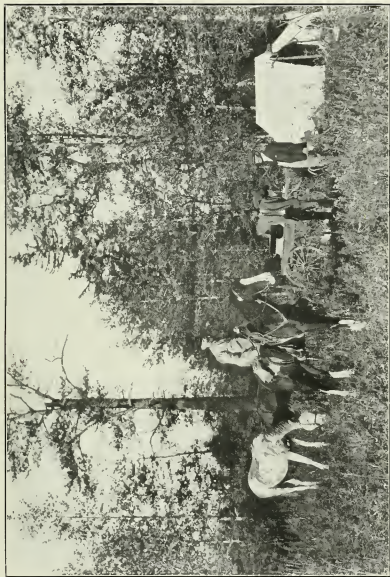
Fish Lake in Long Lake Forest Reserve.



Head-gate on Irrigation Ditch, Alberta Railway and Irrigation Company's scheme.



Cylindrical Screen for shaking out seed, Seedhouse at Forest Nursery Station, Indian Head, Sask.



Forest Ranger interviewing Campers, Cypress Hills Reserve Alberta.



Forest Survey Party, Summer 1908,
Riding Mountain Reserve, Manitoba.



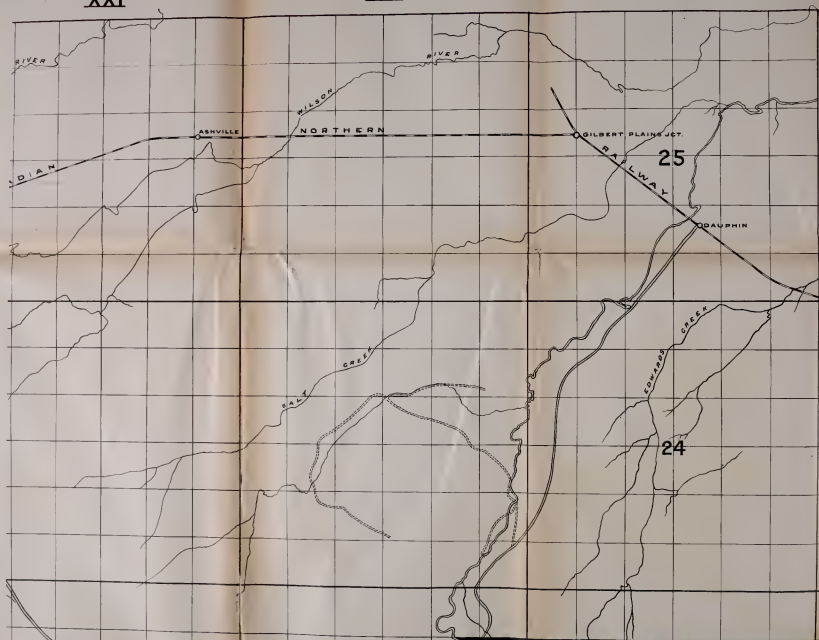
Grazing, Riding Mountain Reserve, Manitoba.



XXI

XX

XIX



XVIII

R1
R2
S1
S2R1
R2
S1
S2
L1
L2
X

T-8-578

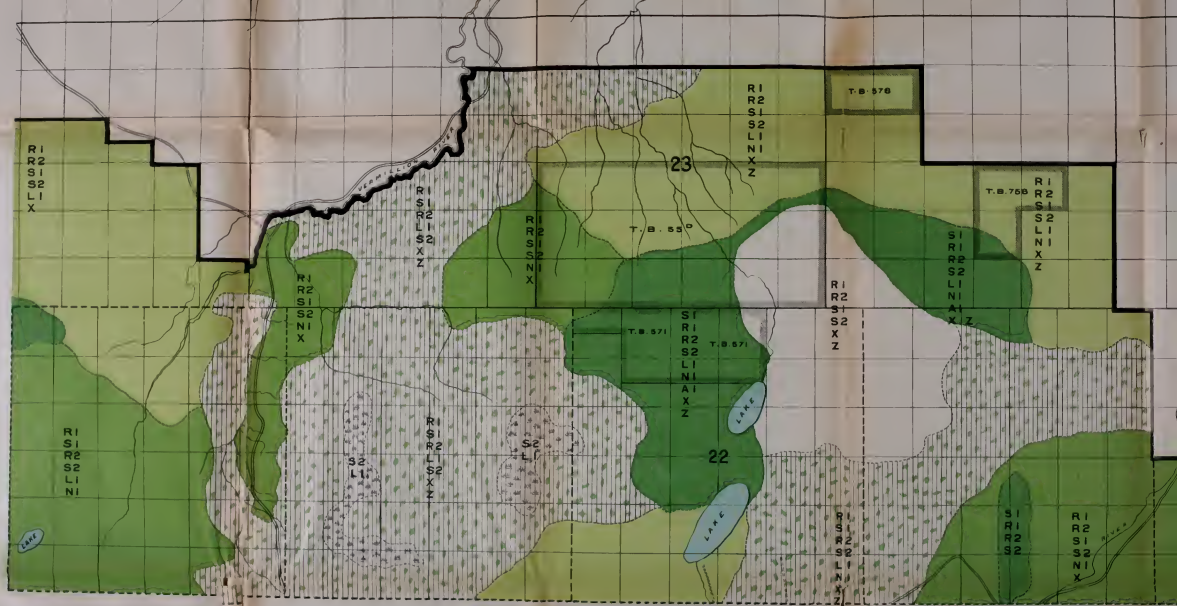
XVII

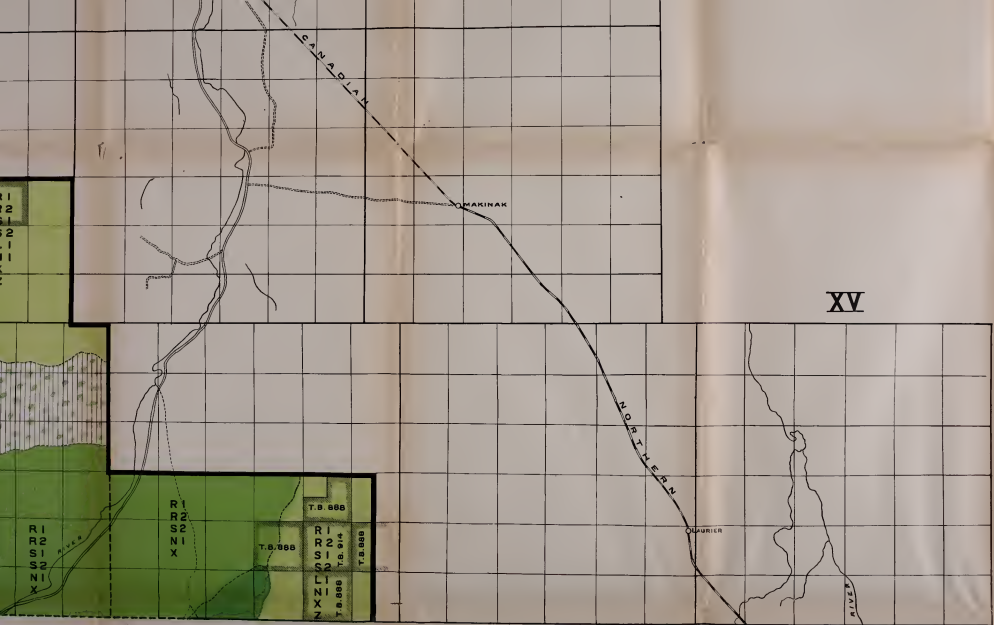
XVI

DAUPHIN LAKE

DOCHRE

CANADIAN





XV

XXVII



XXVI

XXV

Department of the Interior
Canada

HONOURABLE FRANK OLIVER, MINISTER
W. W. CORY, DEPUTY MINISTER

FORESTRY BRANCH

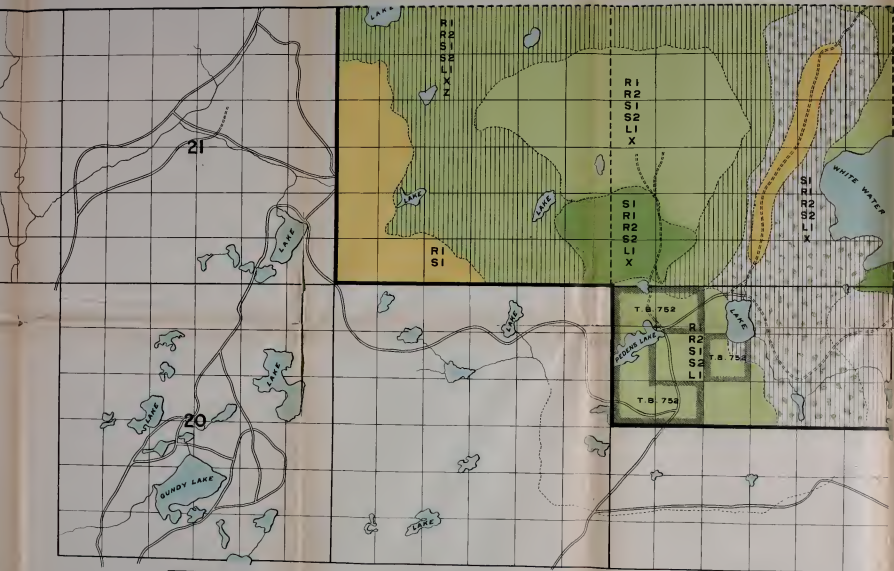
R. H. CAMPBELL, SUPERINTENDENT

RIDING MOUNTAIN FOREST RESERVE

PROVINCE OF MANITOBA

SCALE: ONE MILE TO AN INCH

1900



XXIV

XXIII

XXII

Department of the Interior Canada

HONOURABLE FRANK OLIVER, MINISTER
W. W. CORY, DEPUTY MINISTER

FORESTRY BRANCH

R. H. CAMPBELL, SUPERINTENDENT

RIDING MOUNTAIN FOREST RESERVE PROVINCE OF MANITOBA










SCALE: ONE MILE TO AN INCH

1909

SURVEYED BY J. R. DICKSON, B.S.F.

COMPILED BY GEO. S. PROCTOR


LEGEND

	LESS THAN 2000 B.F. PER ACRE
	2000 TO 5000 B.F. PER ACRE
	WOODLAND, CORDWOOD, POLES, ETC.
	SCATTERED MERCHANTABLE TIMBER
	BURN FOREST COVER ESTABLISHED
	BURN SCATTERED TREES
	BURN NOT RESTOCKING
	GRASSLAND, PARKS, ETC.
	TIMBER BERTHS

SYMBOLS OF TREE SPECIES

R.1. POPULUS TREMULOIDES	ASPEN POPLAR
R.2. POPULUS BALSAMIFERA	BALSAM POPLAR
S.1. PICEA CANADENSIS	WHITE SPRUCE
S.2. PICEA MARIANA	BLACK SPRUCE
N.1. BETULA ALBA var. PAPYRIFERA	CANOE BIRCH
L.1. LARIX AMERICANA	TAMARACK
P.1. PINUS BANKSIANA	JACKPINE
X. SALIX	WILLOW
Z. ALNUS	ALDER

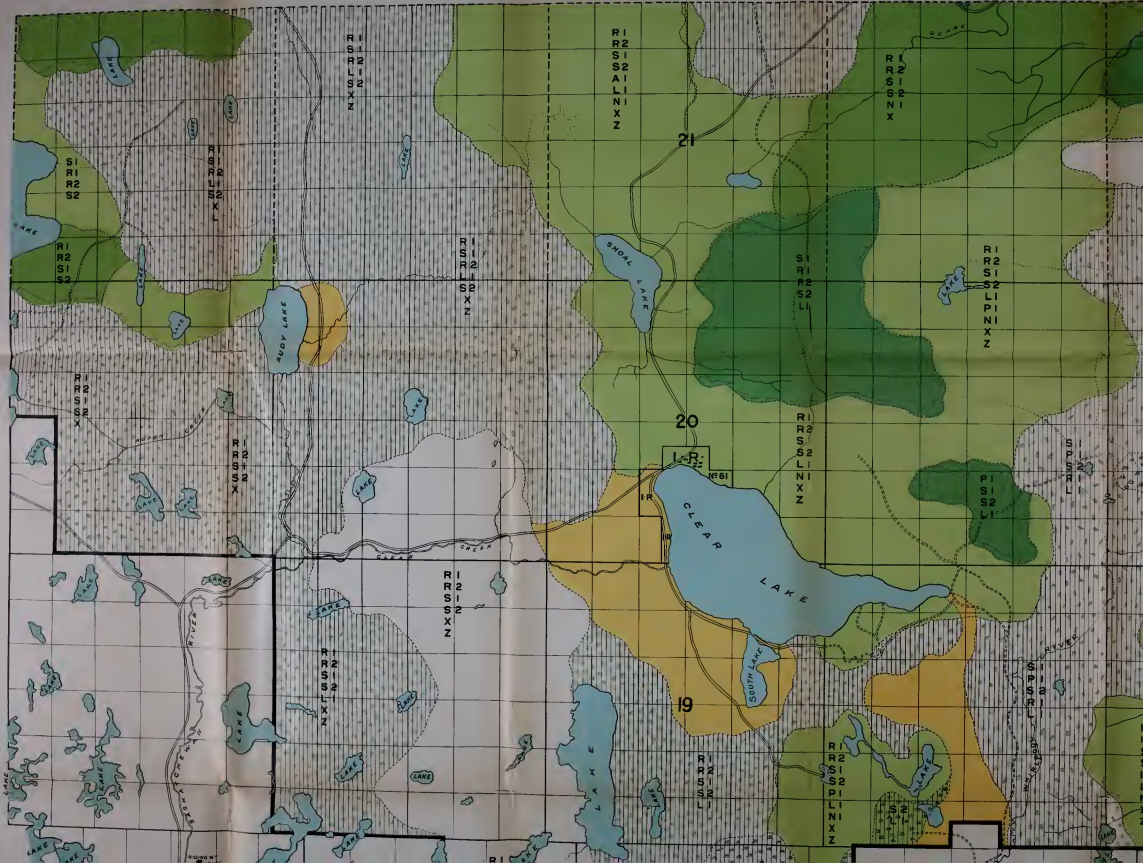
CONVENTIONAL SIGNS

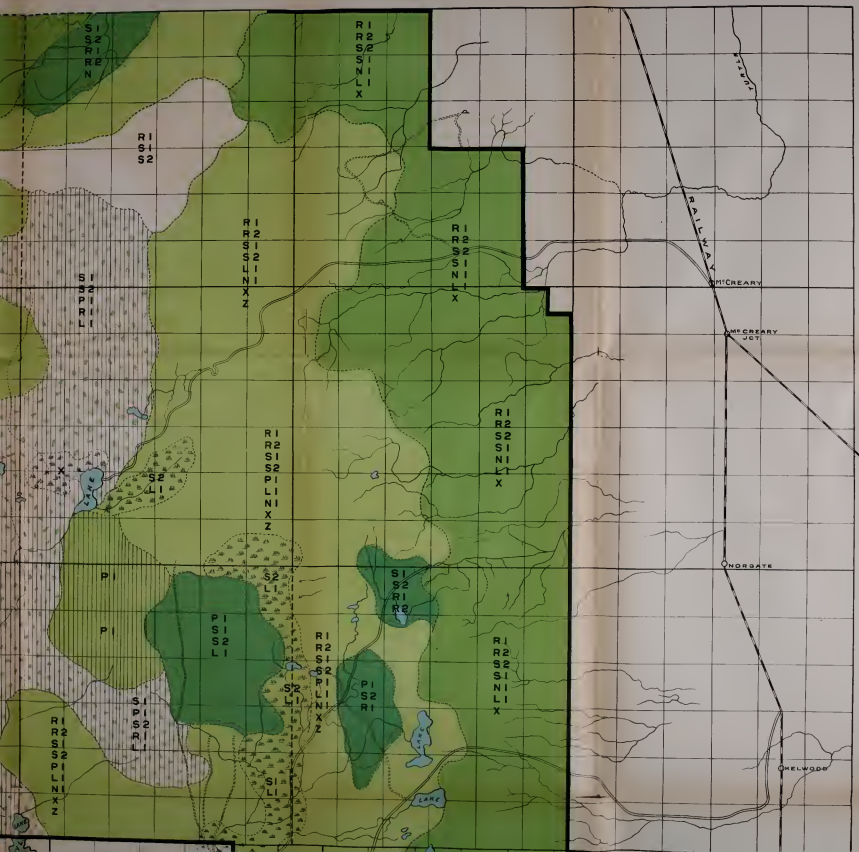
	Peace		Hotel
	Bridge		School
	Ferry		Church
	Foot		Telegraph office
	Rumery		Cabin
	Corral		Logging camp
	Superintendent's headquarters		Sawmill, portable
	Ranger's headquarters		Sawmill, stationary
	House		Grist mill
	Railroad station		Grist and sawmill
			Boundary line for classifications
			Wagon road
			Secondary or private road

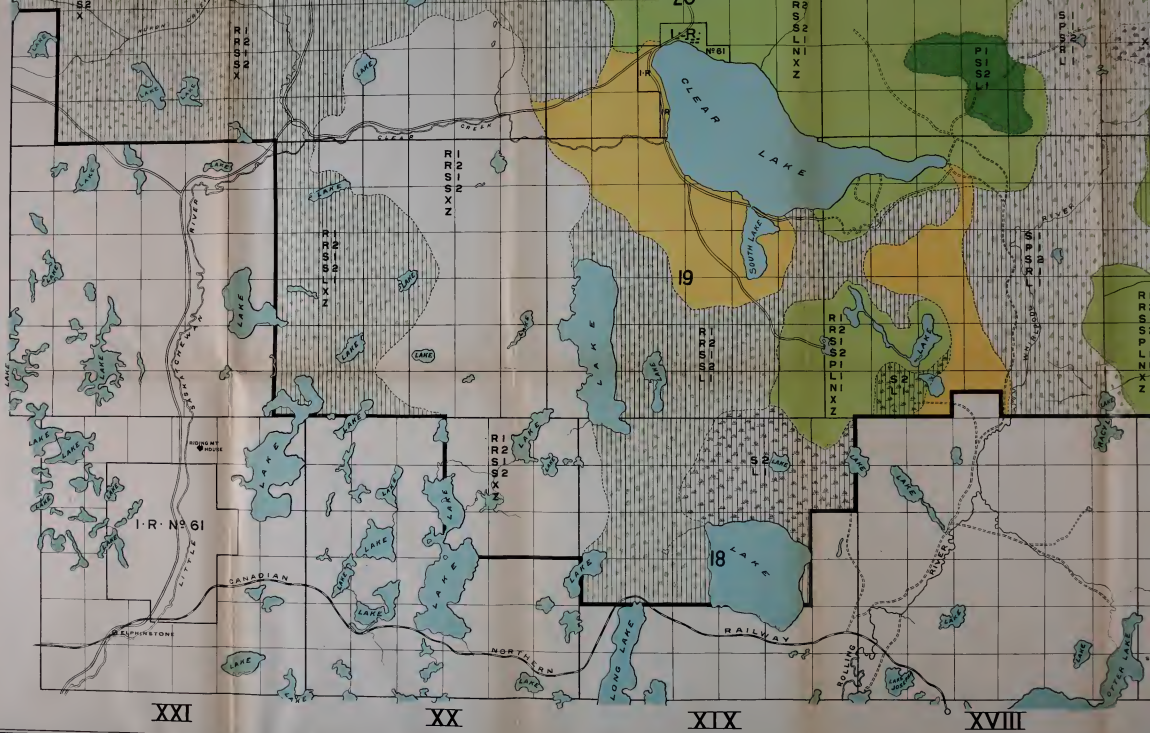
VE

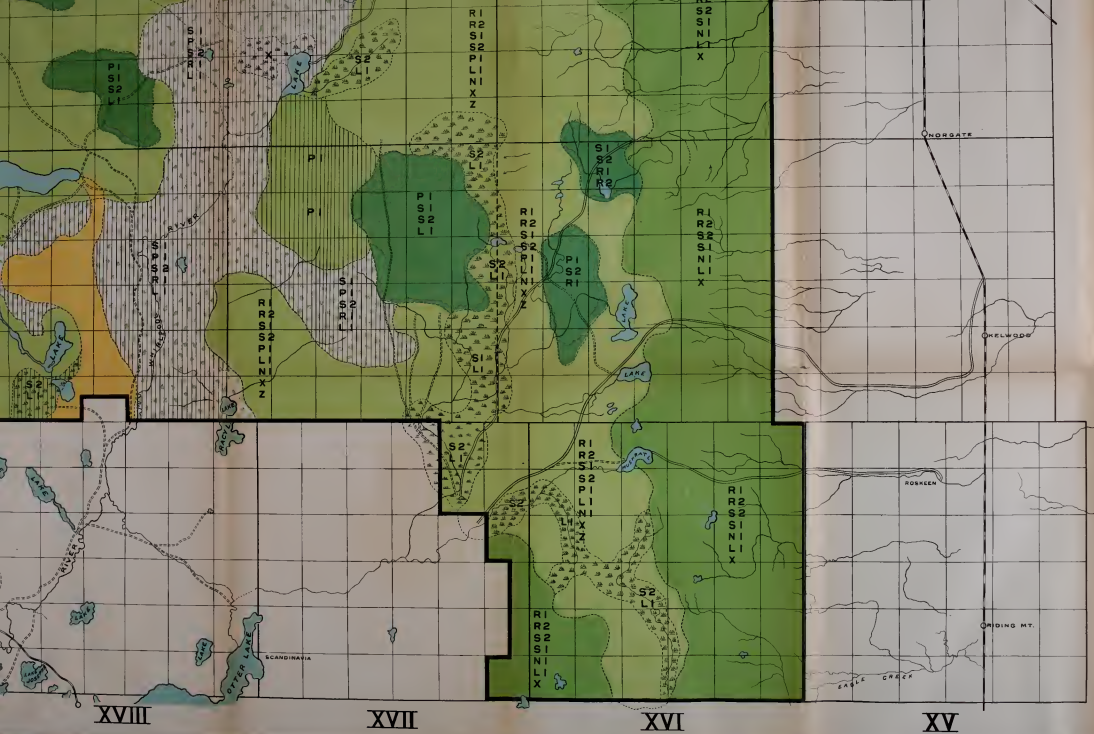




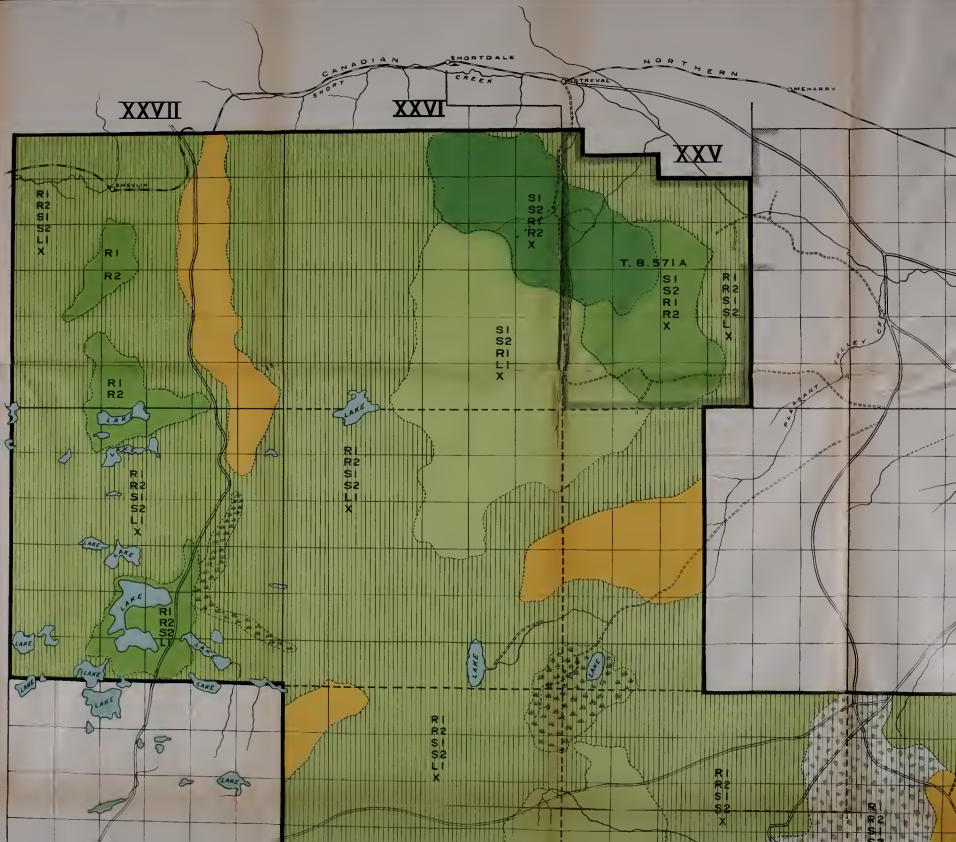












NORTHERN

DEHARRY

XXIV

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XXII

XXV

B 571A

R1
S1
R2
S2
L
X

25

GRAND VIEW

VALLEY

CAMP

GILBERT PLAINS

RIVER

WILSON

24

R1
R2
S1
S2
X

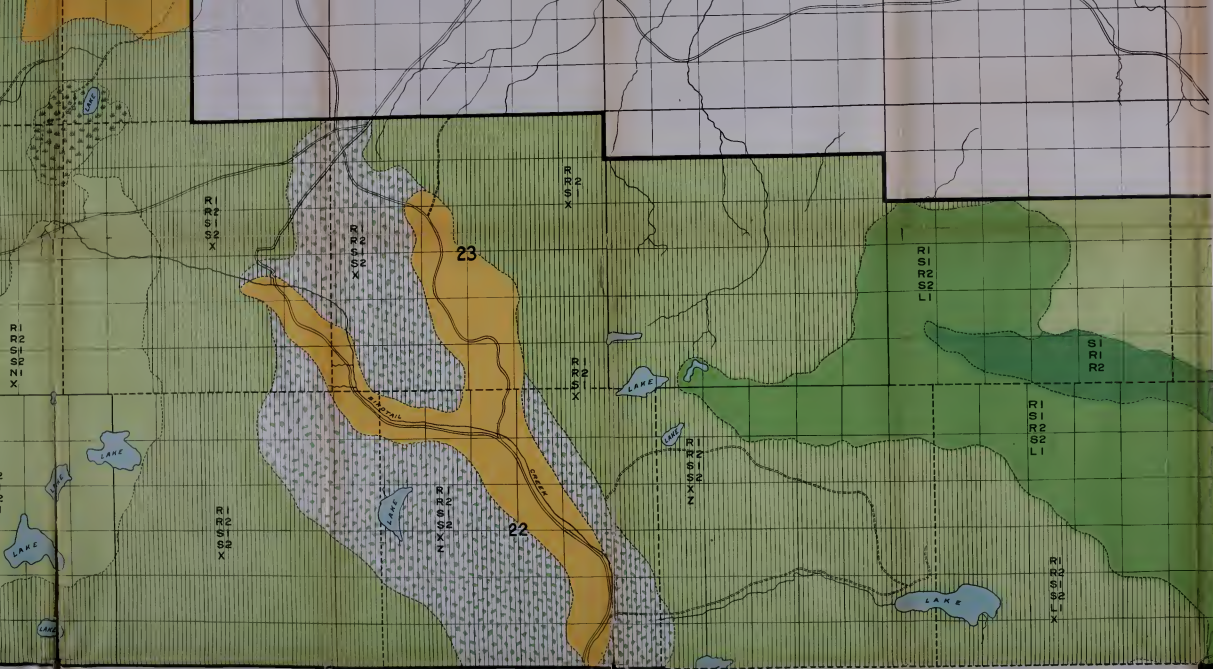
R1
R2
S1
S2
X

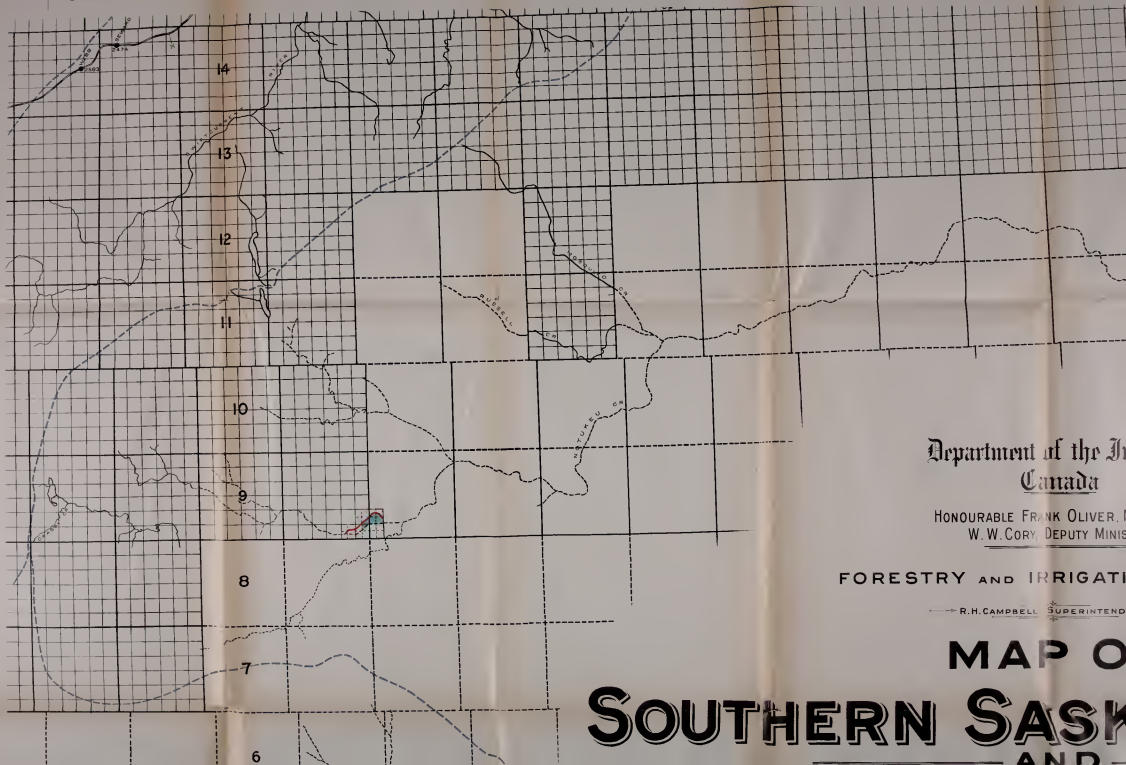
23

R1
R2
S1
S2
X

R1
S1







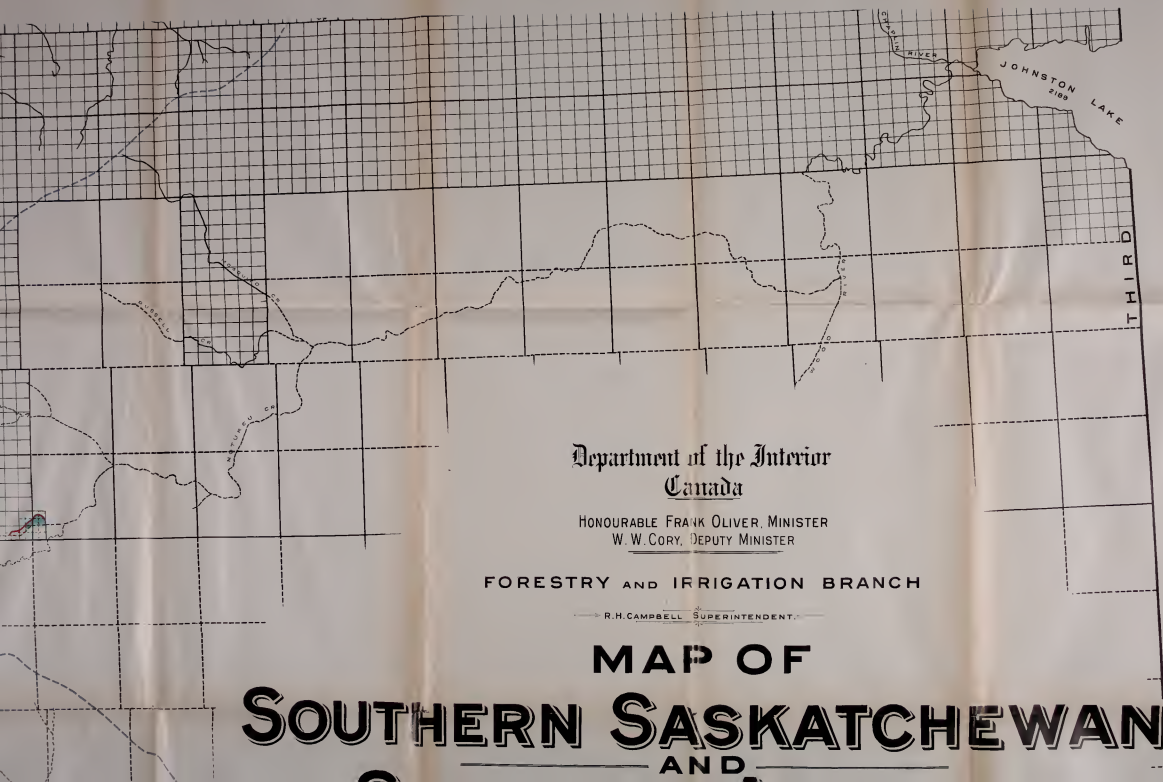
Department of the Interior
Canada

HONOURABLE FRANK OLIVER, M.P.
W. W. CORY, DEPUTY MINISTER

FORESTRY AND IRRIGATION

R. H. CAMPBELL, SUPERINTENDENT

MAP OF
SOUTHERN SASKATCHEWAN
AND



Department of the Interior
Canada

HONOURABLE FRANK OLIVER, MINISTER
W. W. CORY, DEPUTY MINISTER

FORESTRY AND IRRIGATION BRANCH

R. H. CAMPBELL, SUPERINTENDENT

MAP OF
SOUTHERN SASKATCHEWAN
AND

MAP OF
SOUTHERN SASKATCHEWAN
AND
SOUTHERN ALBERTA

SHOWING IRRIGATION CANALS, INDUSTRIAL
AND
LANDS UNDER IRRIGATION

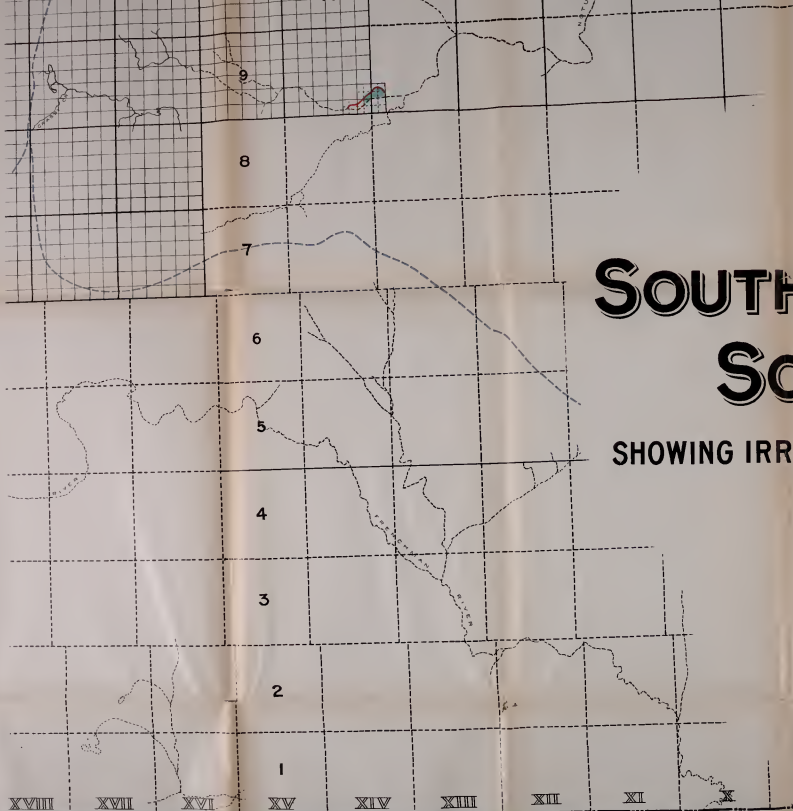
SCALE 3 MILES TO AN INCH

CORRECTED TO MARCH 31ST 1909

COMPILED BY

LEGEND

CONSTRUCTED IRRIGATION CANALS
PROPOSED IRRIGATION CANALS
LANDS IRRIGATED
INDUSTRIAL AND DOMESTIC SCHEMES
RAILWAYS
BOUNDARIES OF WATERSHEDS
ELEVATIONS 1231



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W. W. CORY, DEPUTY MINISTER

FORESTRY AND IRRIGATION BRANCH

R. H. CAMPBELL SUPERINTENDENT.

MAP OF
SOUTHERN SASKATCHEWAN
AND
SOUTHERN ALBERTA

SHOWING IRRIGATION CANALS, INDUSTRIAL AND DOMESTIC SCHEMES
AND
LANDS UNDER IRRIGATION.

SCALE 3 MILES TO AN INCH

CORRECTED TO MARCH 31ST 1909

COMPILED BY GEORGE S. PROCTOR.

LEGEND

CONSTRUCTED IRRIGATION CANALS
PROPOSED IRRIGATION CANALS
LANDS IRRIGATED
INDUSTRIAL AND DOMESTIC SCHEMES
RAILWAYS
BOUNDARIES OF WATERSHEDS
ELEVATIONS 1231

XIII

XII

XI

IX

VIII

VII

VI

V

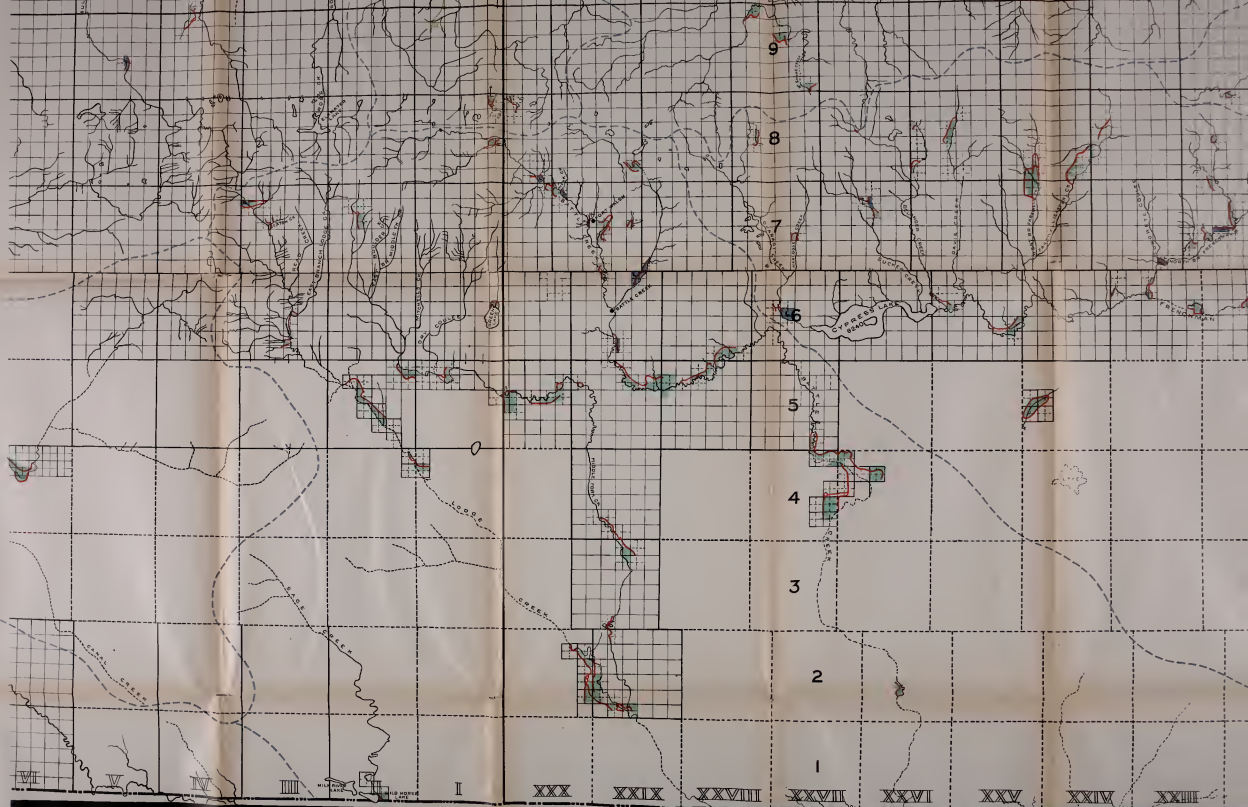
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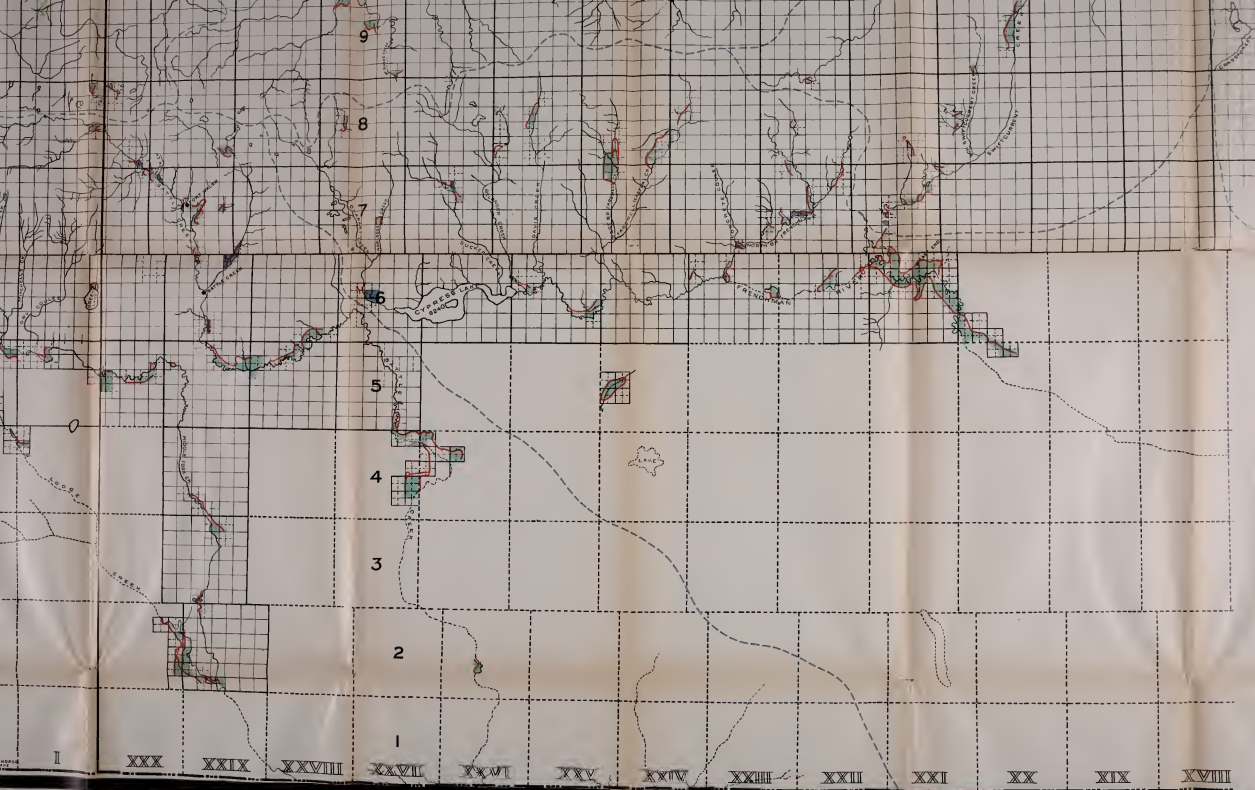
III

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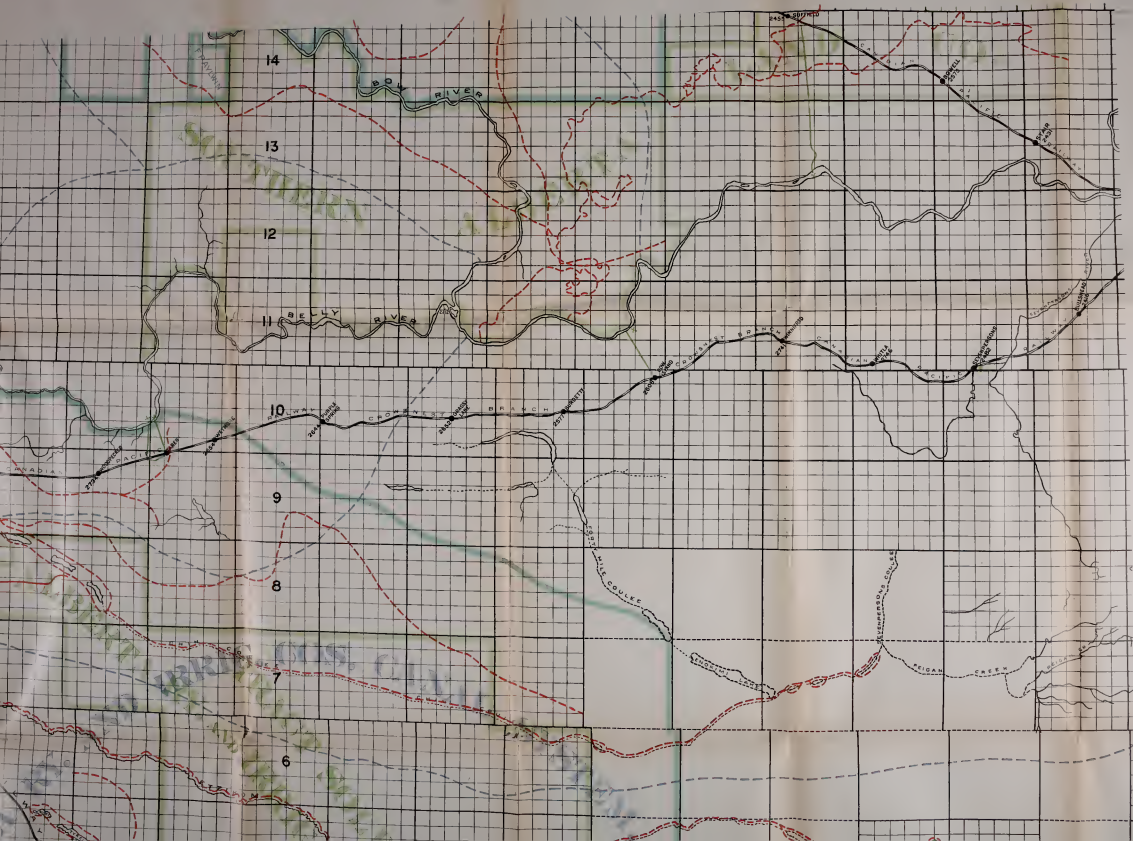


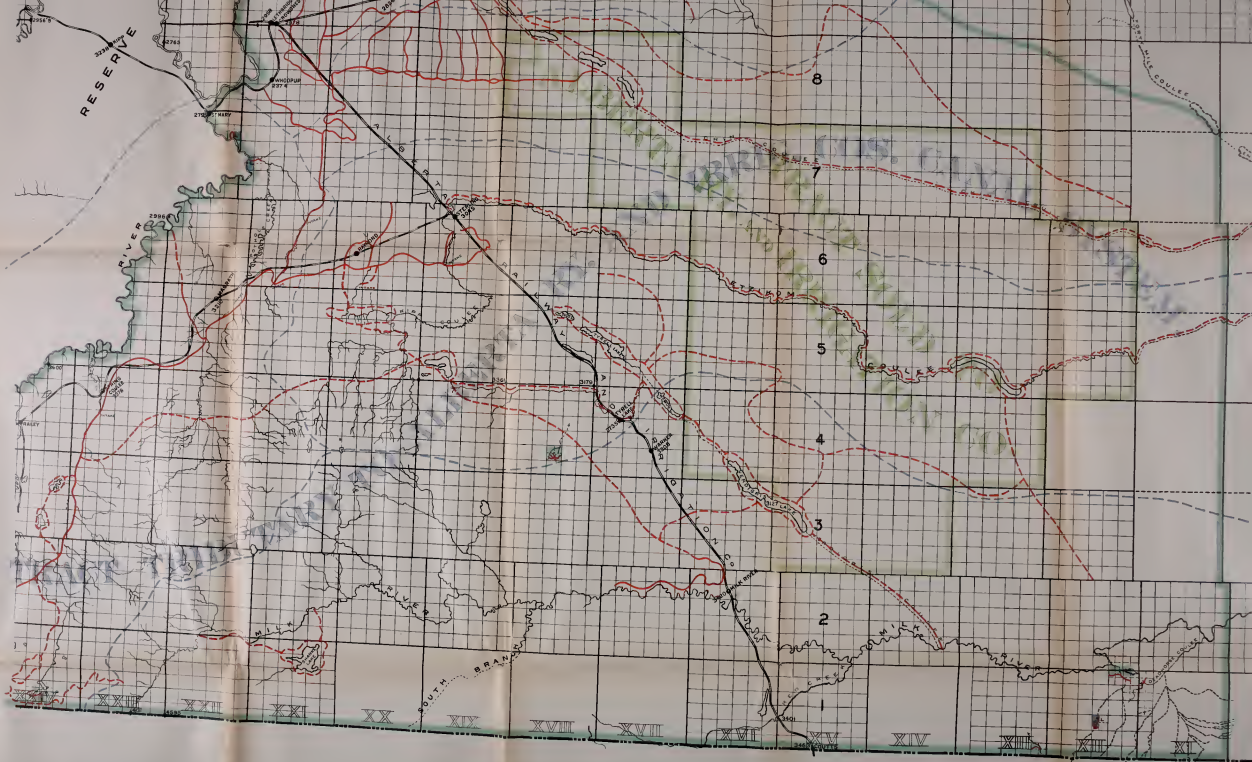


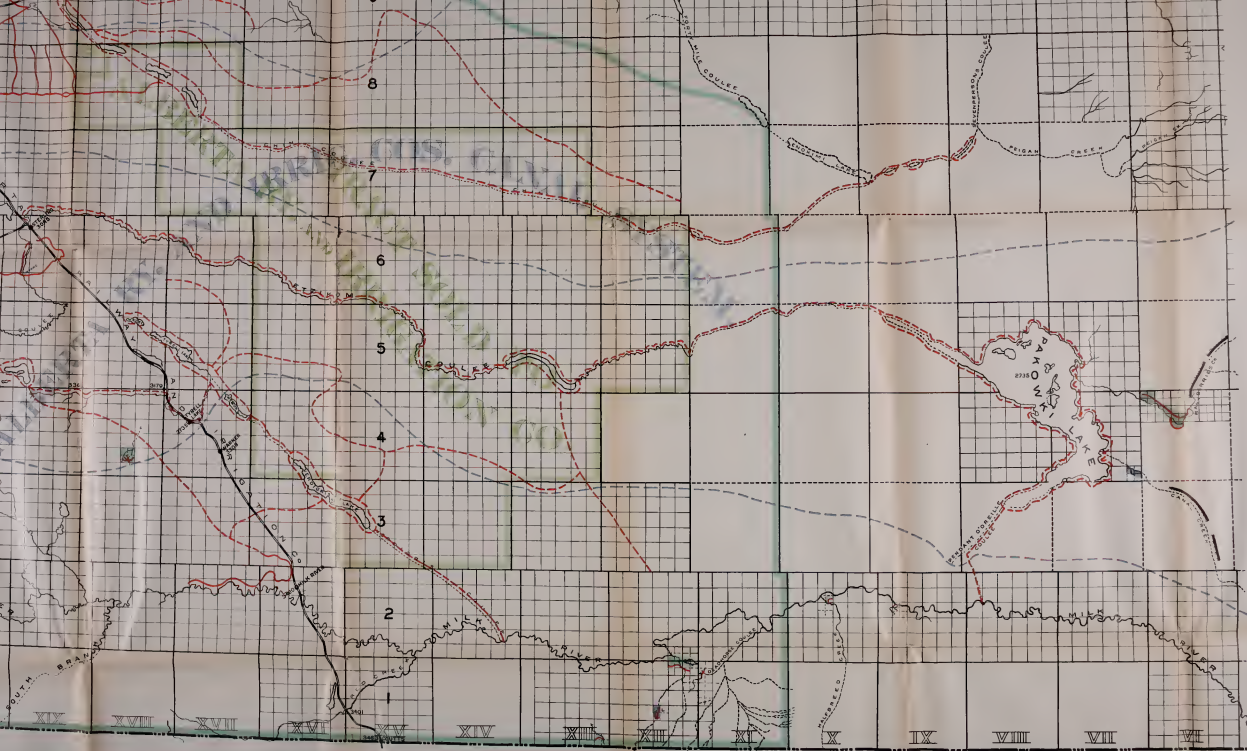












III

COLUMBI



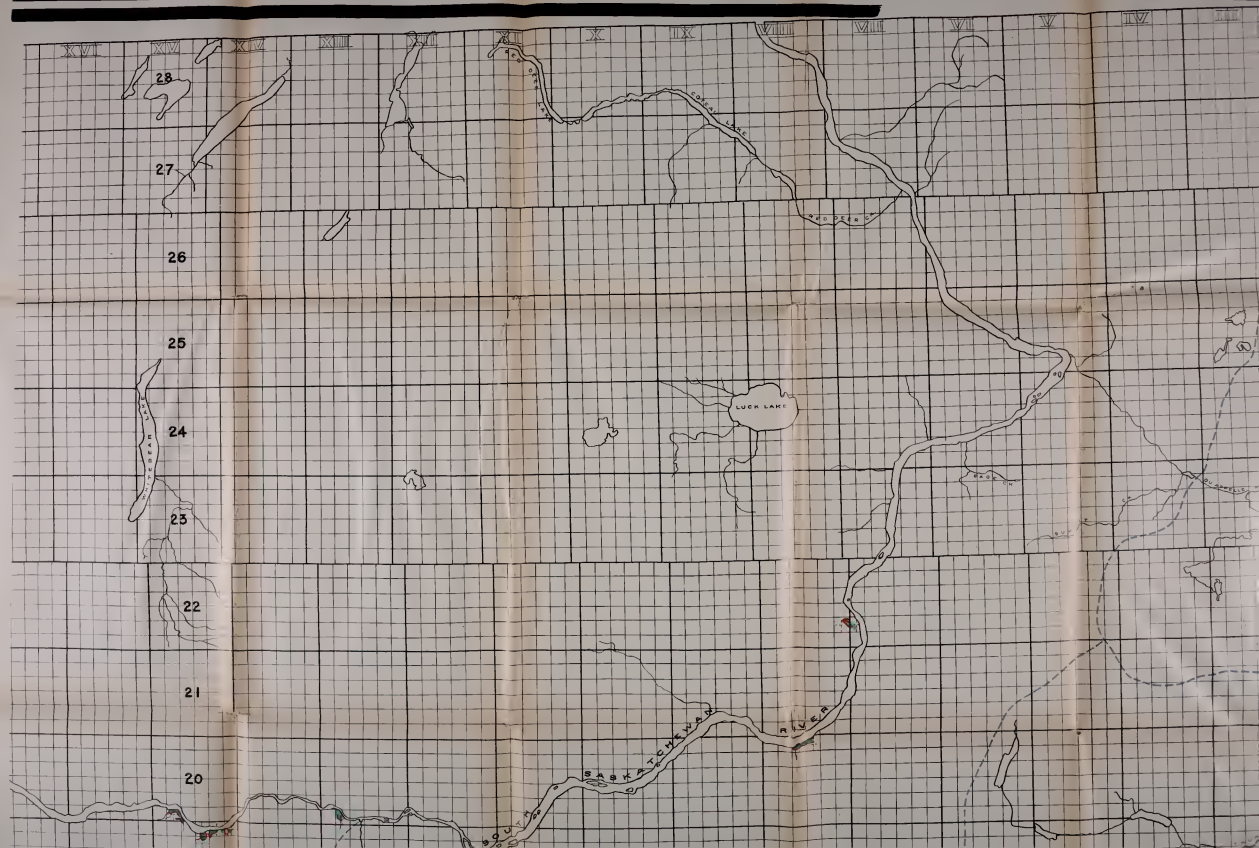
UMBIA

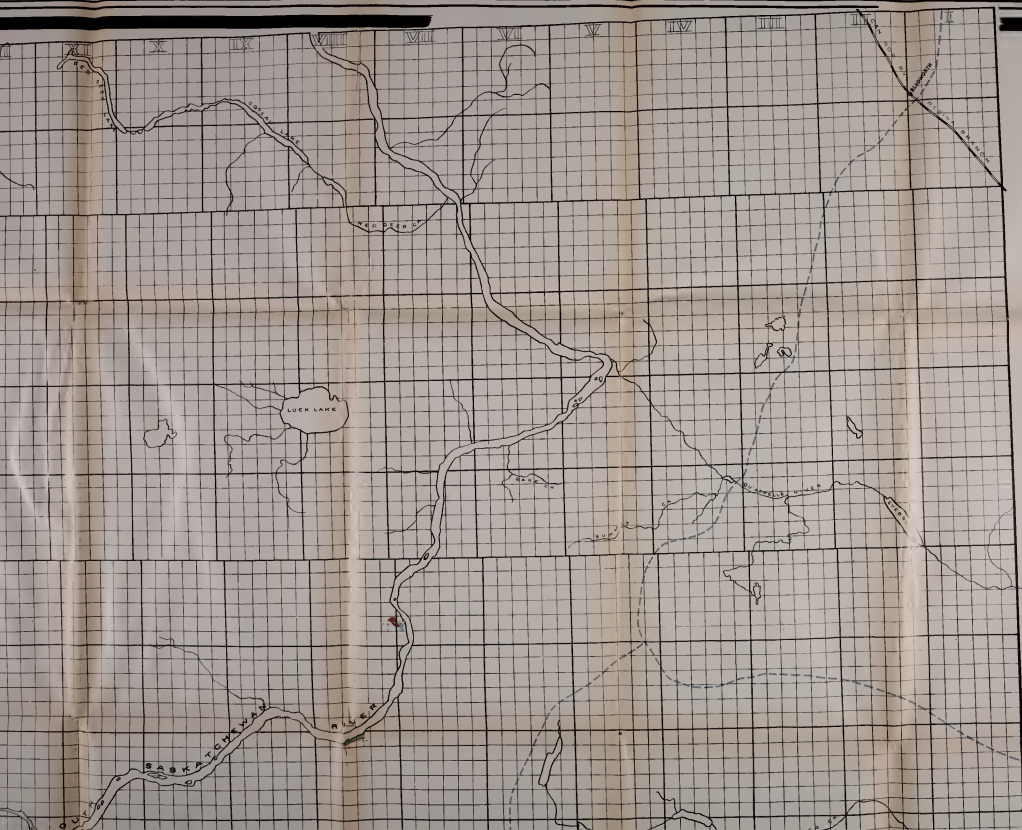


MINNESOTA

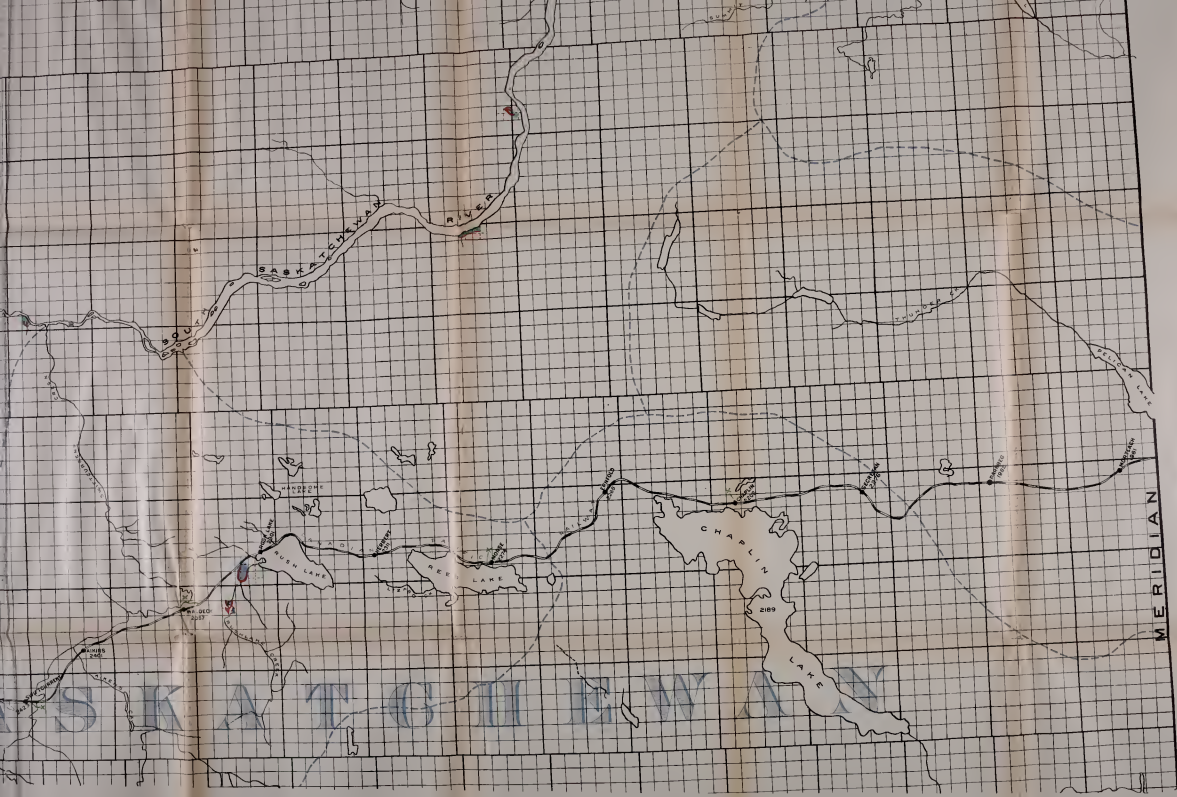


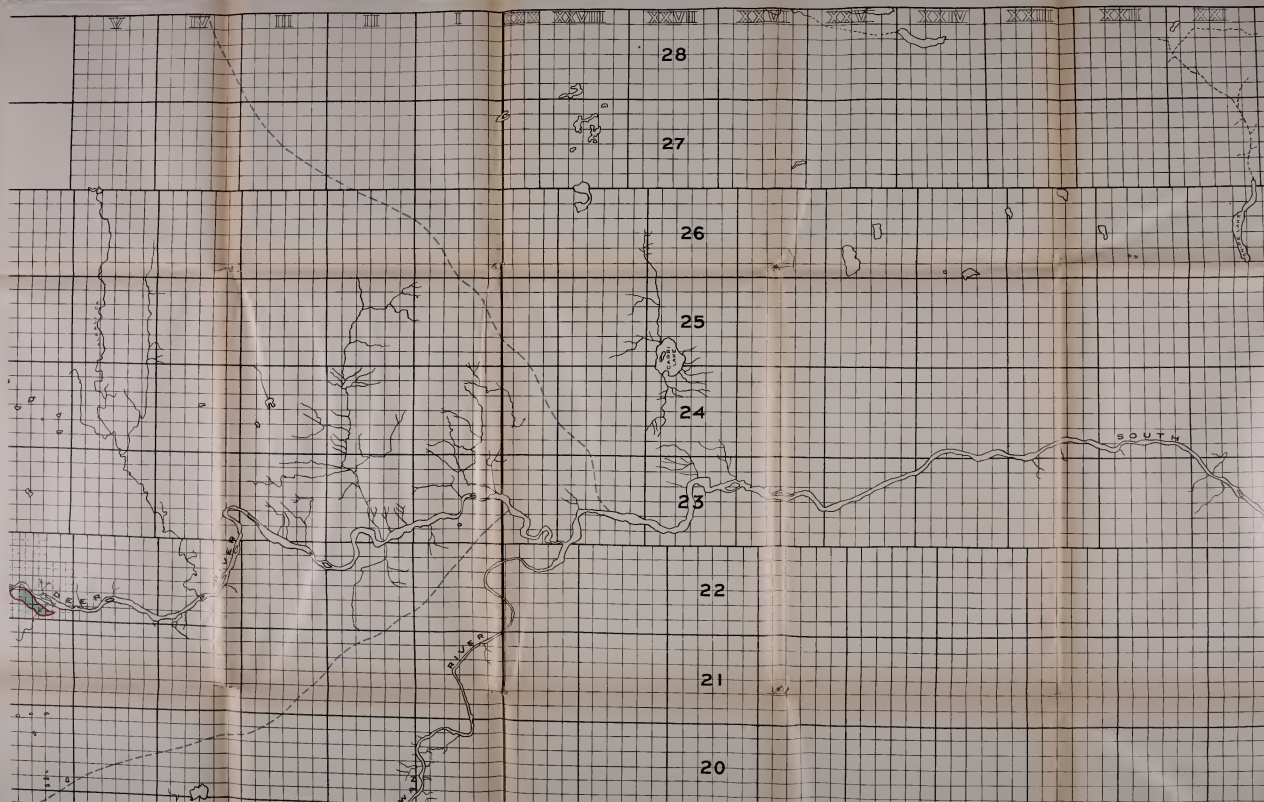


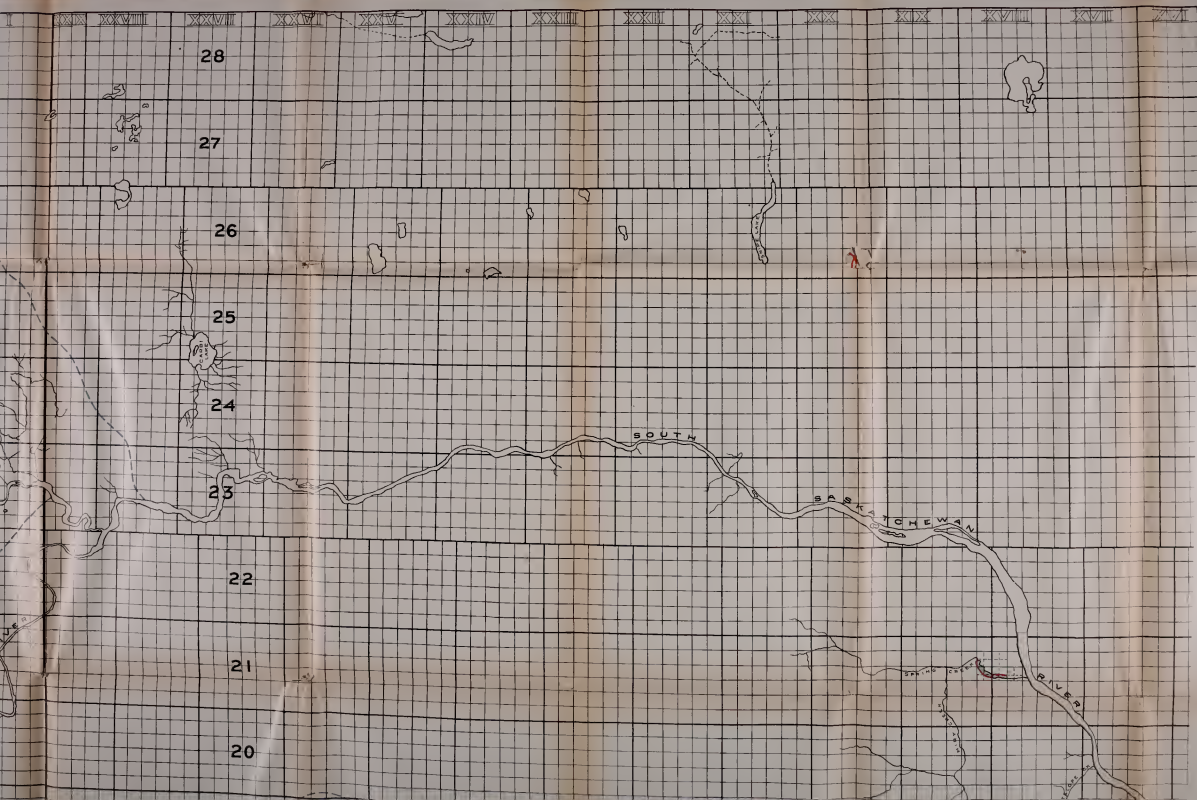


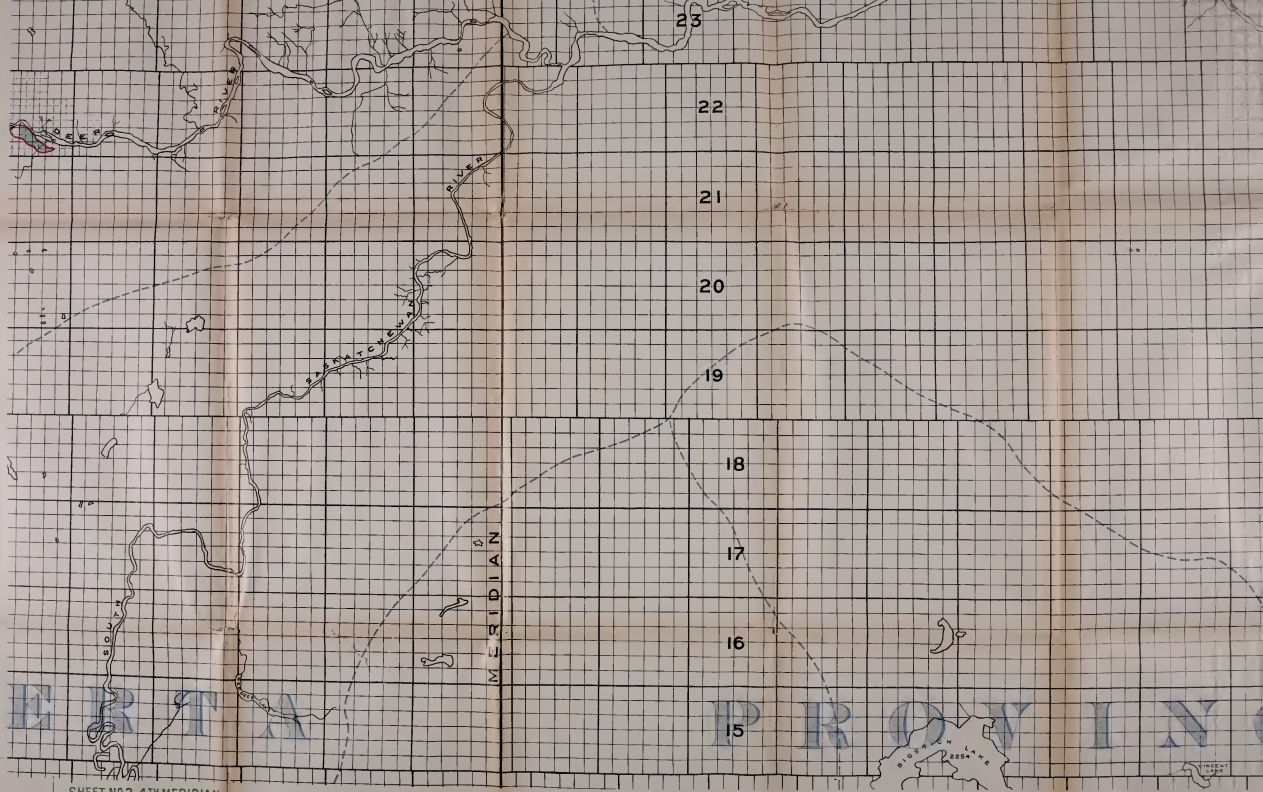












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15

MERIDIAN

PROVINC

